106

Supreme Court, U.S.
FILED
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Nos. 07-984 and 07-990

IN THE

Supreme Court of the United States

COEUR ALASKA, INC., *Petitioner*,

v.

SOUTHEAST ALASKA CONSERVATION COUNCIL, ET AL.,
Respondents.

STATE OF ALASKA, *Petitioner*,

v.

SOUTHEAST ALASKA CONSERVATION COUNCIL, ET AL.,
Respondents.

On Writ Of Certiorari
To The United States Court Of Appeals
For The Ninth Circuit

JOINT APPENDIX
Volume 1 of 2
(Pages 1a–286a)

THEODORE B. OLSON
Counsel of Record
GIBSON, DUNN & CRUTCHER LLP
1050 Connecticut Ave., N.W.
Washington, DC 20036
(202) 955-8500

Counsel for Petitioner
Coeur Alaska, Inc.

THOMAS S. WALDO
Counsel of Record
EARTHJUSTICE
325 Fourth Street
Juneau, AK 99801
(907) 586-2751

Counsel for Respondents
Southeast Alaska
Conservation Council, et al.

[Additional Counsel Listed on Inside Cover]

PETITION FOR WRIT OF CERTIORARI FILED JANUARY 28, 2008
CERTIORARI GRANTED JUNE 27, 2008

1-9407 e 271

MATTHEW D. MCGILL
AARON D. LINDSTROM
GIBSON, DUNN & CRUTCHER LLP
1050 Connecticut Ave., N.W.
Washington, DC 20036

ROBERT A. MAYNARD
PERKINS COIE LLP
251 East Front St. Ste. 400
Boise, ID 83702

Counsel for Petitioner
Coeur Alaska, Inc.

JONATHAN S. FRANKLIN
TILLMAN J. BRECKENRIDGE
FULBRIGHT & JAWORSKI L.L.P.
801 Pennsylvania Ave., N.W.
Washington, DC 20004
(202) 662-0466

TALIS J. COLBERG
Attorney General
STATE OF ALASKA
Department of Law
P.O. Box 110300
Juneau, AK 99811
(907) 465-3600

CAMERON M. LEONARD
Assistant Attorney General
STATE OF ALASKA
Department of Law
100 Cushman St., Suite 400
Fairbanks, AK 99701
(907) 451-2311

Counsel for Petitioner
State of Alaska

SCOTT L. NELSON
PUBLIC CITIZEN LITIGAITON GROUP
1600 20th St., N.W.
Washington, DC 20009
(202) 588-1000

Counsel for Respondents
Southeast Alaska
Conservation Council, et al.

GREGORY G. GARRE
Solicitor General
Counsel of Record
RONALD J. TENPAS
Assistant Attorney General
ELLEN DURKEE
LANE MCFADDEN
Attorneys
DEPARTMENT OF JUSTICE
Washington, DC 20530-0001
(202) 514-2217

Counsel for Federal Respondents

DAVID C. CROSBY
Counsel of Record
5280 Thane Road
Juneau, AK 99801-7717
(907) 586-6262

Counsel for Respondent
Goldbelt, Inc.

[List of Additional Counsel Continued from Front Cover]

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APPENDIX A

General Docket
United States Court of Appeals for the Ninth Circuit

Court of Appeals Docket #: 06-35679

Docketed: 08/10/2006
Termed: 05/22/2007
Nature of Suit: 1893 Environmental Matters Southeast Alaska, et al v. USACE, et al
Appeal From: US District Court for Alaska, Juneau

Case Type Information:
1) civil
2) united states
3) null

Originating Court Information:
District: 097--1 : CV-05-00012-J-JKS
Trial Judge: James K. Singleton, Senior District Judge
Date Filed: 09/12/2005
Date Order/Judgment: 08/04/2006
Date NOA Filed: 08/07/2006

* * * * *

SOUTHEAST ALASKA CONSERVATION COUNCIL; SIERRA CLUB; LYNN CANAL CONSERVATION,

Plaintiffs - Appellants

v.

UNITED STATES ARMY CORPS OF ENGINEERS; TIMOTHY J. GALLAGHER, Colonel, in his official capacity as District Engineer; LARRY L. REEDER, in his official capacity of Chief of the Regulatory Branch; DOMINIC IZZO, in his official capacity as Principal Deputy Assistant Secretary of the Army (Civil Works); UNITED STATES FOREST SERVICE,

Defendants - Appellees

COEUR ALASKA, INC.; GOLDBELT, INC.; STATE OF ALASKA,

Defendant-intervenors - Appellees

AMERICAN RIVERS; CLEAN WATER ACTION NETWORK; COOK INLETKEEPER; EARTHWORKS; FRIENDS OF THE EARTH; NATIONAL WILDLIFE FEDERATION; NATURAL RESOURCES DEFENSE COUNCIL, INC.; OXFAM AMERICA; UNITED STATES PUBLIC INTEREST RESEARCH GROUP; WATERKEEPER ALLIANCE; MEMBERS OF

CONGRESS OF THE UNITED STATES, FRANK PALLONE, JR.; EARL BLUMENAUR; RAUL GRIJALVA; MAURICE D. HINCHEY; RUSH HOLT; MIKE HONDA; DENNIS KUCINICH; BETTY MCCOLLUM; JAMES A. MCDERMOTT; MARTIN T. MEEHAN; DONALD M. PAYNE; JANICE D. SCHAKOWSKY; CHRISTOPHER H. SHAYS; FORTNEY H. (PETE) START, JR.; NEW STUYAHOK TRADITIONAL COUNCIL; MOUNTAIN STATES LEGAL FOUNDATION; SOUTHEAST CONFERENCE; CITY AND BOROUGH OF JUNEAU; BERNERS BAY CONSORTIUM; NATIONAL MINING ASSOCIATION,

Amici Curiae

* * * * *

08/10/2006	8	Filed (filed per 8/24/06 order) Appellants Southeast Alaska Conservation, et al., emergency motion for injunction; exhibits; proposed order; served on 8/10/06 [5915052] (to MOATT)
08/14/2006	10	Filed appellee Coeur Alaska, Inc.'s "faxed" motion to strike plntfs' emergency motion for injunction pending appeal; served on 8/14/06 [5918608] (to MOATT) (hardcopy recvd 8/17/06)

* * * * *

08/18/2006	13	Filed federal appellees USACE, et al. "faxed" response in opposition to emergency motion for injunction pending appeal [5915052-1]; served on 8/18/06 (to MOATT) [06-35679] (hardcopy recvd 8/21/06)
		* * * * *
08/18/2006	15	Filed appellee Goldbelt, Inc.'s "faxed" response in opposition to emergency motion for injunction [5915052-1]; declaration of Randy Wanamaker; exhibits; served on 8/18/06 (to MOATT) [06-35679] (hardcopy recvd 8/22/06)
08/18/2006	16	Filed appellee Coeur Alaska, Inc.'s "faxed" response in opposition to emergency motion for injunction pending appeal [5915052-1]; served on 8/18/06 (to MOATT) [06-35679] (hardcopy recvd 8/21/06)
08/18/2006	17	Filed appellants Southeast Alaska, et al. "faxed" response in opposition to motion to strike emergency motion for injunction pending appeal [5918608-1]; exhibits; served on 8/18/06 (to MOATT) [06-35679] (hardcopy recvd 8/22/06)
		* * * * *
08/21/2006	20	Filed (filed per 8/24/06 order) Appellants Southeast Alaska

		Conservation, et al. "faxed" reply in support of emergency motion [5915052-1]; exhibits; served on 8/21/06 (to MOATT) [06-35679] (hardcopy recvd 8/24/06)
08/22/2006	21	Filed Appellee Coeur Alaska, Inc.'s "faxed" reply in support of its motion to strike [5918608-1]; served on 8/22/06 (to MOATT) [06-35679] (hardcopy recvd 8/23/06)
08/24/2006	24	Filed order MOATT (Alfred T. GOODWIN, Stephen R. REINHARDT,): * * * * [Order granting injunction pending appeal. *See* J.A. 458a.]
		* * * * *
9/14/2006	28	Filed original and 15 copies Appellant Southeast Alaska, et al's opening brief (Informal: n) 54 pages and five excerpts of record in 3 volumes; served on 9/12/06 [06-35679]
		* * * * *
10/04/2006	41	Filed original and 15 copies appellee Coeur Alaska, Inc.'s 51 pages brief, 2 vols of joint Supp EOR (w/federal appellees); served on 10/3/06 (PANEL) [06-35679]
10/04/2006	42	Filed original and 15 copies appellees' US Army Corps of Engineers, Timothy J. Gallagher, Larry L.

		Reeder, Dominic Izzo, US Forest Service's 42 pages brief, 2 vols. of joint Supp EOR (w/appellee Coeur Alaska); served on 10/3/06 (PANEL) [06-35679]
		* * * * *
10/06/2006	52	Filed original and 15 copies appellee State of Alaska's 19 pages brief; served on 10/6/06 (PANEL) [06-35679]
10/06/2006	53	Filed original and 15 copies intervenor- appellee Goldbelt, Inc.'s 16 pages brief; served on 10/3/06 [06-35679]
		* * * * *
10/24/2006	58	Filed original and 15 copies aplts Southeast Alaska, et al., reply brief, (Informal: n) 40 pages, and 5 supp'l excerpts in 1 vol.; served on 10/13/06 (panel already served) [06-35679]
		* * * * *
11/07/2006	67	Filed aple Coeur Alaska, Inc.'s urgent motion to vacate injunction pending appeal on or before 12/8/06; exhibits; served on 11/7/06 [6000308] (faxed to PANEL)
		* * * * *
11/22/2006	70	Filed Appellants Southeast Alaska, et al., response in opposition to Coeur Alaska's urgent

		motion to vacate injunction [6000308-1]; exhibits; served on 11/21/06 (fedex to PANEL) [06-35679]
11/30/2006	71	Filed Appellee Coeur Alaska, Inc.'s reply in support of its urgent motion to vacate injunction pending appeal on or before 12/8/06 [6000308-1]; served on 11/30/06 (faxed to PANEL) [06-35679]
12/04/2006	72	ARGUED AND SUBMITTED TO Procter R. HUG, A. W. TASHIMA, Susan P. GRABER [06-35679]
12/08/2006	73	Filed order (Procter R. HUG, A. W. TASHIMA, Susan P. GRABER,): Appellee Coeur Alaska, Inc.'s Urgent Motion Under Circuit Rule 27-3(b) to Vacate the Injunction Pending Appeal is denied. * * * * [*See* J.A. 460a.]
		* * * * *
05/22/2007	91	FILED OPINION: REVERSED and REMANDED (Terminated on the Merits after Oral Hearing; Reversed; Written, Signed, Published. Procter R. HUG, author; A. W. TASHIMA; Susan P. GRABER.) FILED AND ENTERED JUDGMENT. [06-35679]
		* * * * *

08/20/2007	101	[6265410] Filed original and 50 copies Appellee State of Alaska's petition for rehearing en banc, 18 p.pages; served on 8/17/07 (PANEL, ALL ACTIVE JUDGES AND INTERESTED SENIOR JUDGES) [06-35679]
08/20/2007	102	[6265430] Filed original and 50 copies Appellee Coeur Alaska, Inc. petition for rehearing en banc, 20 p.pages; served on 8/17/07 (PANEL, ALL ACTIVE JUDGES AND INTERESTED SENIOR JUDGES) [06-35679]
08/20/2007	104	[6267155] Filed original and 50 copies Appellee Goldbelt, Inc. petition for rehearing en banc, 13 p.pages; served on 8/17/07 (PANEL, ALL ACTIVE JUDGES AND INTERESTED SENIOR JUDGES) [06-35679]
08/27/2007	106	Filed order (Procter R. HUG, A. W. TASHIMA, Susan P. GRABER,): Plntfs-aplts are requested to file responses to Federal aples' petition for limited panel rehearing and each of the intvrs-aples' petitions for rehearing en banc. Responses are to be filed by 10/5/07. [06-35679]
		* * * * *
10/12/2007	115	Filed original and 3 copies Appel-

		lants Southeast Alaska, et al. response to federal aples' petition for limited panel rehearing [6265284-1]; served on 10/11/07 (to PANEL) [06-35679]
10/12/2007	116	Filed original and 50 copies Appellants Southeast Alaska, et al. response to petition for rehearing en banc of aple Goldbelt, Inc. [6267155-1]; 8 pages; served on 10/11/07 (PANEL, ALL ACTIVE JUDGES AND INTERESTED SENIOR JUDGES) [06-35679]
		* * * * *
10/23/2007	123	Filed orig & 50 copies of Aplts Southeast Alaska, et al. response to petitions for rehearing en banc of Coeur Alaska, Inc. and State of Alaska in 28 pgs; served on 10/11/07. (PANEL, ALL ACTIVE JUDGES & ANY INTERESTED SENIOR JUDGES PREVIOUSLY SERVED) [06-35679]
10/25/2007	128	Filed Appellants Southeast Alaska, et al. response in opposition to motion of Coeur Alaska, Inc. to file reply brief in support of petition for rehearing en banc [6325729-1]; served on 10/24/07 (faxed to PANEL) [06-35679]
10/29/2007	129	Filed order (Procter R. HUG, A. W. TASHIMA, Susan P. GRABER,

		): The panel has voted to DENY the federal aples' petition for limited panel rehearing... [6265284-1] The petitions for rehearing en banc are DENIED. [6265410-1], [6265430-1], [6267155-1] [06-35679]
		* * * * *
11/02/2007	133	Filed aple Coeur Alaska, Inc.'s motion to stay issuance of the mandate pending the filing and disposition for a petition for writ of certiorari; served on 11/2/07 [6339916] (faxed to PANEL)
		* * * * *
11/14/2007	139	Filed order (Procter R. HUG, A. W. TASHIMA, Susan P. GRABER,): * * * *[Order staying the mandate. *See* J.A. 503a.]
11/15/2007	140	Filed Appellants Southeast Alaska, et al. response in opposition to motion of Coeur Alaska, In.c, to stay issuance of the mandate [6339916-1]; exhibits; served on 11/14/07 (to PANEL) [06-35679]
11/26/2007	142	Filed order (Procter R. HUG, A. W. TASHIMA, Susan P. GRABER,): * * * *[Order re reclamation plan. *See* J.A. 504a.]
		* * * * *
06/11/2008	148	Filed order (A. WALLACE

		TASHIMA, SUSAN P. GRABER and PROCTER R. HUG) The parties are directed to provide a status report on the Government's reclamation plan, which was due May 1, 2008.
06/26/2008	149	Filed joint status report; served on 06/25/2008. (PANEL)
07/07/2008	150	Filed order (A. WALLACE TASHIMA, PROCTER R. HUG and SUSAN P. GRABER) In order to keep the court fully informed, we request the parties furnish three copies of the reclamation plan.
07/07/2008	151	Received notice from the Supreme Court. Petition for certiorari GRANTED on 06/27/2008. Supreme Court Number 07-984
07/08/2008	152	Received notice from the Supreme Court. Petition for certiorari GRANTED on 06/27/2008. Supreme Court Number 7-990. The case is consolidated with No. 07-984.
		* * * * *
07/23/2008	154	Filed an orig. & 4 copies Appellee Coeur Alaska, Inc.'s reclamation Plan. (fed-ex PANEL)

APPENDIX B

U.S. District Court
District of Alaska (Juneau)
CIVIL DOCKET FOR CASE #: 1:05-cv-00012-JKS

Southeast Alaska Conservation Council et al v. United States Army Corps of Engineers et al
Assigned to: James K. Singleton, Jr
Case in other court: 9CCA, 06-35679
Cause: 05:702 Administrative Procedure Act

Date Filed: 09/12/2005
Date Terminated: 08/03/2006
Jury Demand: None
Nature of Suit: 893 Environmental Matters
Jurisdiction: U.S. Government Defendant

Date Filed	#	Docket Text
* * * * *		

04/04/2006	28	AMENDED COMPLAINT *(First)* against Timothy J. Gallagher, Larry L. Reeder, Dominic Izzo, U.S. Forest Service, United States Army Corps of Engineers, filed by Southeast Alaska Conservation Council, Sierra Club, Lynn Canal Conservation.(Schane, Demian) (Entered: 04/04/2006)
* * * * *		
04/05/2006	31	MOTION to Intervene by Coeur Alaska, Inc.. (Attachments: # 1 Text of Proposed Order Motion to Intervene# 2 # 3)(Berghoff, John) (Entered: 04/05/2006)
* * * * *		
04/06/2006	33	MOTION to Intervene by State of Alaska. (Attachments: # 1 Proposed Order# 2 Proposed First Amended Answer)(Heese, Ruth) (Entered: 04/07/2006)
* * * * *		

04/07/2006	38	MOTION to Intervene by State of Alaska. (Attachments: # 1 Proposed Order# 2 Proposed First Amended Answer)(Heese, Ruth) (Entered: 04/07/2006)
* * * * *		
04/07/2006	41	MOTION for Summary Judgment by Southeast Alaska Conservation Council, Sierra Club, Lynn Canal Conservation. (Attachments: # 1 Text of Proposed Order Proposed Order Granting Injunction# 2 # 3 # 4 # 5 # 6 # 7 # 8 # 9 # 10 # 11)(Schane, Demian) (Entered: 04/07/2006)
* * * * *		
05/03/2006	61	RESPONSE in Opposition re 41 MOTION for Summary Judgment filed by Goldbelt, Incorporated. (Attachments: # 1 Exhibit # 2 Exhibit # 3 Exhibit # 4 Exhibit # 5 Exhibit # 6 Exhibit # 7 Exhibit # 8 Exhibit # 9 Exhibit # 10 Exhibit)(Crosby, David) (Entered: 05/03/2006)
* * * * *		

05/05/2006	67	RESPONSE in Opposition re 41 MOTION for Summary Judgment filed by State of Alaska. (Attachments: # 1 Exhibit State's A# 2 Exhibit State's B# 3 Exhibit State's C# 4 Exhibit State's D-I# 5 Exhibit State's D-II# 6 Exhibit State's E# 7 Exhibit State's F)(Leonard, Cameron) (Entered: 05/05/2006)
* * * * *		

05/05/2006	71	RESPONSE in Opposition re 41 MOTION for Summary Judgment filed by Coeur Alaska, Inc.. (Attachments: # 1 Exhibit 1# 2 Exhibit 2# 3 Exhibit 3# 4 Exhibit 4# 5 Exhibit 5# 6 Exhibit 6# 7 Exhibit 7# 8 Exhibit 8# 9 Exhibit 9# 10 Exhibit 10# 11 Exhibit 11, pages 1-34# 12 Exhibit 11, pages 35-68# 13 Exhibit 12# 14 Exhibit 13# 15 Exhibit 14# 16 Exhibit 15# 17 Exhibit 16# 18 Exhibit 17# 19 Exhibit 18# 20 Exhibit 19# 21 Exhibit 20# 22 Exhibit 21# 23 Exhibit 22# 24 Exhibit 23# 25 Exhibit 24# 26 Exhibit 25# 27 Exhibit 26, pages 1-30# 28 Exhibit 26, pages 31-55# 29 Exhibit 27# 30 Exhibit 28# 31 Exhibit 29# 32 Exhibit 30# 33 Exhibit 31# 34 Exhibit 32)(Berghoff, John) (Entered: 05/05/2006)
* * * * *		

05/05/2006	80	REPLY to Response to Motion re 41 MOTION for Summary Judgment filed by Southeast Alaska Conservation Council, Sierra Club, Lynn Canal Conservation. (Attachments: # 1 Exhibit 43# 2 Exhibit 44# 3 Exhibit 45# 4 Exhibit 46# 5 Exhibit 47, part 1# 6 Exhibit 47, part 2# 7 Exhibit 48, part 2# 8 Exhibit 48, part 2# 9 Exhibit 49# 10 Exhibit 50# 11 Exhibit 51# 12 Exhibit 52# 13 Exhibit 53# 14 Exhibit 54# 15 Exhibit 55)(Schane, Demian) (Entered: 05/18/2006)
* * * * *		
05/18/2006	104	REPLY to Response to Motion re 41 MOTION for Summary Judgment filed by Southeast Alaska Conservation Council, Sierra Club, Lynn Canal Conservation. (Attachments: # 1 Exhibit 43# 2 Exhibit 44# 3 Exhibit 45# 4 Exhibit 46# 5 Exhibit 47, part 1# 6 Exhibit 47, part 2# 7 Exhibit 48, part 2# 8 Exhibit 48, part 2# 9 Exhibit 49# 10 Exhibit 50# 11 Exhibit 51# 12 Exhibit 52# 13 Exhibit 53# 14 Exhibit 54# 15 Exhibit 55)(Schane, Demian) (Entered: 05/18/2006)

* * * * *		
08/03/2006	118	JUDGMENT that complaint is dismissed w/prejudice; judgment is entered in favor of Defendants . Signed by Judge James K. Singleton on 8/3/2006. (DPM,) (Entered: 08/04/2006)
08/04/2006	117	MEMORANDUM DECISION denying 41 Motion for Summary Judgment; granting 80 Cross-Motion for Summary Judgment; complaint is hereby DISMISSED w/prejudice . Signed by Judge James K. Singleton on 8/3/2006. (DPM,) (Entered: 08/04/2006)
08/04/2006	119	MOTION for Preliminary Injunction Pending Appeal (shortened time) by Southeast Alaska Conservation Council, Sierra Club, Lynn Canal Conservation. (Attachments: # 1 Proposed Order Granting Injunction Pending Appeal)(Waldo, Thomas) (Entered: 08/04/2006)
* * * * *		

08/07/2006	125	NOTICE OF APPEAL as to 117 Order on Motion for Summary Judgment by Southeast Alaska Conservation Council, Sierra Club, Lynn Canal Conservation. (Attachments: # 1 Civil Cover Sheet Civil Appeals Docketing Statement# 2 Exhibit Representation Statement)(Waldo, Thomas) (Entered: 08/07/2006)
* * * * *		
08/22/2006	136	RESPONSE in Opposition re 119 MOTION for Preliminary Injunction Pending Appeal (shortened time) filed by State of Alaska. (Attachments: # 1 Exhibit Hughes Declaration part 1# 2 Exhibit Hughes Declaration part 2)(Leonard, Cameron) (Entered: 08/22/2006)

08/22/2006	137	RESPONSE in Opposition re 119 MOTION for Preliminary Injunction Pending Appeal (shortened time) filed by Coeur Alaska, Inc.. (Attachments: # 1 Exhibit A# 2 Exhibit B# 3 Exhibit C# 4 Exhibit D# 5 Exhibit E# 6 Exhibit F# 7 Exhibit G# 8 Exhibit H# 9 Exhibit I# 10 Exhibit J# 11 Exhibit K# 12 Exhibit L# 13 Exhibit M# 14 Exhibit N# 15 Exhibit O# 16 Exhibit P)(Berghoff, John) (Entered: 08/22/2006)
08/22/2006	138	RESPONSE in Opposition re 119 MOTION for Preliminary Injunction Pending Appeal (shortened time) filed by Goldbelt, Incorporated. (Crosby, David) (Entered: 08/22/2006)
* * * * *		

08/23/2006	143	REPLY to Response to Motion re 119 MOTION for Preliminary Injunction Pending Appeal (shortened time) filed by Southeast Alaska Conservation Council, Sierra Club, Lynn Canal Conservation. (Attachments: # 1 Exhibit 1# 2 Exhibit 2# 3 Exhibit 3)(Schane, Demian) (Entered: 08/23/2006)
* * * * *		

APPENDIX C

RESPONSE TO COMMENTS DOCUMENT FOR FINAL RULE AMENDING THE ENVIRONMENTAL PROTECTION AGENCY'S AND U.S. ARMY CORPS OF ENGINEERS' CLEAN WATER ACT SECTION 404 DEFINITIONS OF "FILL MATERIAL" AND "DISCHARGE OF FILL MATERIAL"

May 3, 2002

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RESPONSE TO COMMENTS DOCUMENT FOR FINAL RULE AMENDING THE ENVIRONMENTAL PROTECTION AGENCY'S AND U.S. ARMY CORPS OF ENGINEERS' CLEAN WATER ACT SECTION 404 DEFINITIONS OF "FILL MATERIAL" AND "DISCHARGE OF FILL MATERIAL"[1]

May 3, 2002

1. Introduction

This Response to Comments Document was prepared as part of the joint rulemaking process in which the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) issued a final rule amending their respective Clean Water Act (CWA) section 404 regulatory definitions of "fill material" and "discharge of fill material." This rulemaking process was initiated on April 20, 2000. The comment period for the proposal closed on July 19, 2000, after a 60-day comment period had been extended for an additional 30 days. The agencies received over 17,200 comments on the proposal, including several hundred comments that were received after the close of the comment period, but were nevertheless considered. This document summarizes the major issues raised in the public comments and the agencies responses. This document is part of the Administrative Record supporting the agencies' final rule.

---

[1] Hereinafter referred to as "the Response to Comments Document."

2. Background

A. April 2000 Proposal

In April 2000, the agencies proposed revisions to their respective definitions of "fill material" and "discharge of fill material," adopting a single effects-based definition for fill material and making conforming changes to the latter term. From 1977 until the issuance of the rule developed in this process, EPA and the Corps have had different definitions of the term "fill material." The Corps defined "fill material" based on the purpose of the activity. **Its definition of "fill material" adopted in 1977 read as follows: "The term 'fill material' means any material used *for the primary purpose* of replacing an aquatic area with dry land or of changing the bottom elevation of an [sic] water body. The term does not include any pollutant discharged into the water primarily to dispose of waste, *as that activity is regulated under section 402 of the Clean Water Act.*" 33 CFR 323.2(e)(2001) (emphasis added).**

In contrast, the EPA regulations at 40 CFR 232.2 defined "fill material" as "any 'pollutant' which replaces portions of the 'waters of the United States' with dry land or which changes the bottom elevation of a water body *for any purpose*" (emphasis added). EPA's definition focused on the effect of the material (an effects-based test), rather than the purpose of the discharge in determining whether it would be regulated by section 404 or section 402.

The April 2000 proposed rule defined "fill material" as material that has the effect of replacing any portion of a water of the U.S. with dry land, or changing the bottom elevation of any portion of a water of the U.S. The proposal removed from the Corps'

definition the "primary purpose" test and the provision excluding pollutants discharged into water primarily to dispose of waste. The April proposal also would have excluded from the definition discharges subject to an EPA proposed or promulgated effluent limitation guideline or standard under CWA sections 301, 304, 306, or discharges covered under a NPDES permit under CWA section 402. Finally, the April proposal solicited comments on the idea of the agencies creating an "unsuitable fill" category in the regulations that would identify materials that the Corps District Engineer could determine were not appropriate as fill material and, consequently, refuse to process an application seeking authorization to discharge such material.

B. The May 2002 Final Rule

The final rule retains the "effects-based" approach of the proposal, defining "fill material" in both the Corps' and EPA's regulations as material placed in waters of the United States where the material has the effect of either replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water. The examples of "fill material" identified in the rule include rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in waters of the U.S. The final rule also includes an explicit exclusion from the definition of "fill material" for trash or garbage.

Today's final rule also includes several changes to the term "discharge of fill material." Most significantly, the term now includes the phrases "placement of fill material for construction or maintenance of any liner, berm, or other infrastructure

associated with solid waste landfills" and "placement of overburden, slurry, or tailings or similar mining-related materials." These phrases have been added to the definition of "discharge of fill material" to provide further clarification of the types of activities that will be regulated.

This final rule was developed after considering the comments provided on the April proposal.

3. Summary of and Responses to Comments on the April 2000 Proposal

A. Overall Summary

We received over 17,200 comments on the proposed rule, including several hundred late comments, most of which consisted of identical or substantially identical e-mails, letters, and postcards opposing the rule. (In April 2002, an additional several thousand letters and e-mails were sent opposing the adoption of a rule similar to the proposal.) Approximately 500 of the original comments consisted of more individualized letters, with a mixture of those comments supporting and opposing the rule. The comments of environmental groups and the various form letters were strongly opposed to the proposal, in particular, the elimination of the waste exclusion and the discussion in the preamble regarding treatment of unsuitable fill material. Except for several landfill representatives, comments from the regulated community generally supported the proposal, in particular, the fact that the rule would create uniform definitions of "fill material" for the Corps' and EPA's rules and maintain regulation of certain discharges under section 404 as opposed to section 402 of the CWA. While the above characterization reflects the general framework for the proponents and opponents of the rule, both raised a

number of specific issues that are identified and discussed below.

Because of the nature of the comments (e.g., many identical or substantially identical), we were able to categorize the comments by issue. We then summarized the comments addressing each issue and developed a response to the issue. Those summaries and responses are provided below. This document is organized by category, with the first part of the document (sections III. A - I) addressing issues raised about the proposal and the latter part of the document (section III J) reflecting alternative approaches or clarifications to the proposed rule that were recommended.

B. Purpose and Need for Proposed Rule Change

The comments received regarding the purpose and need for the proposed rule change reflect both support and opposition to the proposal. A significant number of those commenting support the agencies' effort to make consistent the Corps' and EPA's regulatory definition of "fill material," as well as their elimination of the primary purpose test in favor of an effects-based definition. However, many commenters expressed opposition to the proposed elimination of the waste exclusion from the definition of "fill material," and specifically asked that the "placement of coal mining overburden" not be added to those activities that can be authorized by the Corps as a "discharge of fill material." Many stated that the proposed rulemaking would "result in an unconscionable weakening of the Clean Water Act" by allowing the Corps to permit the deposition of waste into waters of the United States.

One commenter remarked that "the impetus for this proposed rule is the continued regulation of valley fills by the Corps, and not improved implementation of the Clean Water Act." Additionally, changes regarding the permitting of solid waste landfills could more appropriately be made through agency guidance or through "supplementing the 1986 MOA with clarifying terms."

One commenter was generally opposed to the proposed rule changes arguing that "they would serve as an unbelievable capitulation to coal companies" and would result in a weakening of existing clean water laws. Another stated that "instead of rewriting the rules to allow more fills and other discharges into the nation's waters," the Corps and EPA should strive to "uphold their Section 404 responsibilities in compliance with Clean Water Act goals."

Several commenters stated that the "proposed broadening of the Corps' jurisdiction is unwarranted," and concerns were expressed regarding the effect of the proposed rulemaking on the regulation of discharges from the on-board processing of sand and gravel by instream dredging operations, and on hard rock mining activities.

In light of the comments we received on the proposed rulemaking, we remain convinced of the fundamental need to reconcile the differing definitions of "fill material" in our regulations. We disagree with the assertion that the reconciliation of the definitions by adopting EPA's 25-year old effects-based approach somehow would weaken the CWA either by allowing waste disposal in waters or broadening jurisdiction. The fact that we have essentially implemented the EPA-based approach since 1977 discredits the notion that this rulemaking now

results in a change from past practice and allows impermissible waste disposal. Moreover, the suggestion that this rulemaking now provides a legal basis for previously illegal activities is not the case—no discharges that were previously prohibited are now authorized as a result of this rulemaking.

It is important to note, however, that we do agree with the sentiments expressed by many commenters opposed to the rule that the agencies need to do a more comprehensive job at implementing existing provisions of CWA section 404 as they pertain to the review and conditioning of permits for certain discharges, including those that result from mining activities. Guidance from Corps headquarters in 2000 and changes to Nationwide general permit 21 in 2002 are concrete actions that have been taken recently to improve implementation. The agencies also concur that additional environmental improvements under the CWA and under the Surface Mining Control and Reclamation Act should be evaluated, and we remain committed to completing the programmatic Environmental Impact Statement on Mountaintop Mining and Valley Fills to facilitate such reviews.

A majority of those commenting on the purpose and need for the rulemaking, whether or not they supported specific aspects of the proposal, supported the basic objective of unifying the definitions. As a matter of good government and reducing regulatory uncertainty, we agree that our definitions should be identical. We also believe that, for a single definition, maintaining EPA's long-standing effects-based approach, in lieu of one based on purpose, is preferable because it provides a more objective and predictable approach for ensuring that section 404, the regula-

tory regime best suited for controlling discharges with the effect of fill, is used. Likewise, elimination of the so-called "waste exclusion" from the Corps' definition is preferable as it is generally consistent with current agency practice and it does not expand the types of discharges that will be covered under the CWA section 404 program. Specific discussions of the purpose and need for the rule are provided below and organized under subheadings dealing with conforming the regulatory definitions, eliminating the primary purpose test, and eliminating the waste exclusion.

1. Conforming Corps and EPA Definitions

Regarding comments received concerning conforming Corps and EPA definitions through the proposed rulemaking, the majority of commenters were in support of making consistent the Corps' and EPA's regulatory definition of "fill material." One commenter stated, "it clears up longstanding confusion arising from the differing definitions of the two agencies, and therefore simplifies and clarifies the regulatory schemes and compliance obligations. Another noted that eliminating the current discrepancy between the EPA and Corps definitions of "fill material" will "improve the clarity and consistency of the Section 404 regulations, and will avoid the need for litigation predicated on the differences in the existing rules." Furthermore, another commenter states the current lack of consistency "has created the potential that, for certain kinds of discharges, there was no regulatory program pursuant to which authorization could be obtained."

One commenter "agrees that regulatory consistency among federal agencies implementing the

CWA is a good thing when done for the right reasons. However, a proposal to change the definitions, now purportedly to rectify misinterpretations by federal courts, does not make sense." The commenter cites several additional fill-related court cases that have not warranted a change in the regulations. Additionally, the commenter states, as proposed, "by regulating some types of mining wastes under the 402 program and others under the 404 program, they belie their claim that this proposal will retain current practice and resolve regulatory differences."

Although one commenter agreed that "appropriate clarifications will avoid the confusion and problems associated with the past differences in the definitions," the agencies have continually acted in a manner more consistent with the "effects" test than the Corps' "primary purpose" test. Another commenter states, "a unified definition will help eliminate confusion. Unfortunately, we believe the proposed definition, although similar to the current EPA definition, is difficult to interpret and apply to activities." One commenter speaks to the "regulatory uncertainty" caused by having inconsistent definitions of "fill material" by stating that there is "nothing uncertain about the current regulatory scheme" as it applies to the practice of valley fills. In keeping with the regulatory agencies' efforts to provide consistency, one commenter suggests that "the two agencies develop an identical list of every known type of fill material."

In light of the comments we received on the proposed rulemaking, we affirm our position that conforming the regulations by adopting a single definition is necessary and desirable. Importantly, as a matter of good government, we believe that a uni-

form definition will eliminate any uncertainty and confusion that may have been bred by different definitions applying to the same regulatory program. The final rule achieves this objective.

Specifically, in response to the commenter that disputed whether the proposed changes would resolve regulated community and court misinterpretations, we disagree. Although regulatory action is not the automatic result of relevant court decisions or confusion on the part of the regulated public, it is an appropriate response in the present situation. Not only had confusion on the part of the regulated community occurred, it was manifest in several court actions. In addition, these court actions did not impact one type of activity, but at least two-those of landfill construction and those of certain mining discharges. Moreover, the agencies had issued guidance to address the confusion in the regulated community, but issues continued to be raised. Given the significance of the issues and the less than successful attempts to resolve them short by guidance, a rulemaking to clarify the issue was warranted. While we can certainly not guarantee that every future issue is put to rest with the final rulemaking, the extensive nature of the comments received by the public has greatly assisted the agencies in addressing a wide variety of the final rule's implications.

In response to the specific comment regarding the suggestion that we develop a list of every known type of fill material, we conclude that this exercise would not be practicable. A number of examples of materials generally included and not included are provided in the final rule language and/or are discussed in the preamble. We note that the use of certain examples in the final rulemaking was a re-

sult of public comment to increase clarity. However, it is unlikely that a list of every known fill material could be generated, given the variety of materials that are or could be discharged. We are satisfied that the expanded discussion in the final rule language itself and the preamble is informative and representative, without being unwieldy.

2. Eliminating Primary Purpose Test

An overview of the comments received regarding the proposed elimination of the primary purpose test from the definition of "fill material" reveals both support and opposition. A significant number of those commenting supported the replacement of the Corps' "primary purpose test" with an effects-based definition.

One commenter noted the change to an effects-based test "will finally close an infamous loophole that has allowed wetlands to be filled as long as the permit applicant could point to a "primary purpose" other than fill (e.g., solid waste landfill or temporary road construction)." Another commenter stated, "removal of the primary purpose test and replacing it with the effects test will promote greater clarity and consistency in the regulatory approach for wetlands protection." They further stated that currently some discharges occur without permit authorization under either section 402 or section 404 of the CWA, a violation of section 301, as a result of the failure to regulate these fills because of the primary purpose test.

As discussed in the preamble to the proposed rule (65 FR 21,294-21,295), we agree that use of a "primary purpose test" to define fill material has caused confusion and engendered litigation, problems which can be substantially reduced or avoided

by use of a more objective effects-based test. With regard to comments on unpermitted discharges being a violation of section 301, this comment is outside the scope of the rule, which addresses the issues of how to define "fill material."

In contrast, another commenter asserted a "purpose-based test can be enforced fairly and in the public interest" particularly with regard to waste regulation. Also noted was the "inherent subjectivity of the wood chips example" discussed in the Public Notice. The commenter suggested that potential abuses in interpretation of a purpose-based test could be addressed through "consideration of the economics of the proposed commercial activity (particularly the costs of alternatives available to meet the intended purpose)." Another commenter also challenged concerns about the subjective nature of the determinations performed by the Corps in applying the primary purpose test. The commenter stated the Corps "is quite capable (evidenced by the fact that it has been doing it for years) to determine if the primary purpose is to get rid of waste or to construct a fill."

We do not agree that use of a primary purpose test is preferable to use of an effects-based test for a number of reasons. Our practical experience with use of a primary purpose test is that it does result in uncertainty and confusion, as for example, in the *RII* case. Although, as the commenter suggested, the Corps is capable of evaluating project purpose, such an evaluation nonetheless is subjective, does not ensure use of the most appropriate permitting regime, and as evidenced by *RII* is subject to a differing interpretation by the court. We believe that in assigning a discharge to section 404 versus section

402 permitting, it is important to apply the regulatory regime that is in fact best-equipped to consider and control the impacts of the potential discharge. Because section 404 and its implementing regulations are specifically designed to address discharges that fill waters of the U.S., we believe that it should apply to discharges that have such an effect, rather than looking to the primary purpose of the discharge. Although we agree that today's final rule does not eliminate all subjectivity (as in the wood chip example given above), use of an effects-based test does substantially improve clarity and objectivity compared to the subjective nature of a primary purpose test. With regard to the comment suggesting use of an economics-based approach to implement a purpose-based test, this would still assign discharges to section 404 versus section 402 on the basis of the purpose of the discharge, rather than on the basis of which regime is best-equipped to control the potential impacts. In addition, while use of an economics based approach could perhaps reduce some of the subjectivity associated with a purpose-based test, it does not do so to the degree that an effects-based test accomplishes, would require development of economic yardsticks which themselves would be subject to subjectivity, and would unnecessarily add a further degree of analytical complexity and information needs to the permitting process. We thus do not agree with comments favoring use or retention of a purpose-based test.

One commenter supporting the proposed change to an effects-based definition of fill stated it should not be up to the Corps District Engineers' discretion "to define what constitutes fill, or what constitutes effects." It was further suggested that, based on the CWA section 404(b)(1) Guidelines, "the Corps and

EPA should determine at the national level what structures, works and activities have the effect of fill."

We do not agree with these comments. Implementation of an effects-based test is best left to the permitting authority (e.g., for section 404, the District Engineer), as they are in the best position to know local conditions and ascertain a discharge's effects. In addition, by adopting a single consistent effects-based test, today's rule provides the permitting authority with an objective means for assessing the applicability of section 404 and helps ensure consistency between the Corps and EPA in determining what constitutes "fill material." With regard to the suggestion that a national level determination should be made as to what activities or works have the effect of fill, it is not feasible to come up with a comprehensive or exhaustive list, and use of an effects-based test instead both improves clarity while still being sufficiently broad to encompass the full range of materials that should be treated as "fill material." We also note that as described in the preamble to today's rule, additional examples of "fill material" and the "discharge of fill material" have been added to the final rule.

One commenter indicated that "while an 'environmental effects' test may be appropriate to the definition of 'fill material' in the Section 402 program, it is not necessarily similarly appropriate to the definition of 'fill material' in the Section 404 program, even if it provides some benefit or clarity," and went on to state there are situations in which a broad "environmental effects" trigger is inappropriate for bringing about Section 404 regulation. The commenter also asserted an environmental effects

rationale was, found to exceed the Corps authority when the court invalidated "the Tulloch Rule regulating all excavation activities, including those that were merely removal activities with only incidental fallback."

We believe that a single and consistent definition of the term "fill material" is necessary to provide consistency and certainty in implementation of the CWA. Use of separate approaches to define that term under sections 404 and 402 result in uncertainties and potential regulatory gaps in which material does not clearly fall within one program or the other. Matters related to the "Tulloch Rule" (which defines the term "discharge of dredged material" and "incidental fallback") are fully discussed in that rule's preamble (66 FR 4550) and are outside the scope of this rule. Moreover, today's rule does not use an effects-based test to determine if a discharge occurs, but rather to determine when a given discharge falls into the category of "fill material" subject to section 404. We also note that unlike the Tulloch Rule, which implicates questions of when an addition of a pollutant occurs in the context of dredging and excavation activities, the effects-based test adopted in today's definition of "fill material" addresses additions of material to waters of the U.S. to such a degree and amount that it creates dry land or raises the bottom elevation.

Another commenter suggested eliminating the primary purpose test will increase Corps workload. They were concerned the proposed change would elicit an expansion of the Corps' "jurisdiction on certain kinds of fill material...and would slow the permit approval process further." We expect that because today's rule is generally consistent with existing practice it will not have substantial effects

on Corps workload or engender permit delays. In addition, unlike the proposal, today's final rule is more limited in scope as it contains an express exclusion from the definition of fill for trash and garbage.

Another commenter expressed concern that elimination of the "primary purpose" test in favor of an effects-based definition of fill would cause circumvention of the CWA by allowing polluters to "pass off waste material as fill," particularly with regard to coal mining activities. We do not agree that today's rule would "cause circumvention of the Clean Water Act." The Act itself does not define or dictate what constitutes "fill material," leaving it to the discretion of the agencies to define that term. As explained in the proposed rule preamble (65 FR 21294 - 21295) and the preamble to the final rule, use of a primary purpose test and differing Corps and EPA definitions of fill material has resulted in regulatory uncertainties and confusion. Today's rule is intended to avoid such problems, and is well with the agencies' authority and discretion to adopt.

3. Eliminating Waste Exclusion

Regarding comments received concerning the proposed rule's elimination of the waste exclusion, the majority of commenters were opposed to omitting the current waste exclusion language from the proposed definition of fill material. One commenter stated, "elimination of the waste exclusion would give the Corps new authority to allow the disposal of refuse directly into the nation's waters, . . . and is an outrageous attempt to circumvent the letter and spirit of the Clean Water Act." Furthermore, prohibiting the disposal of waste "in the nation's waters under Section 404 is mandated by the letter, purpose, goals, and Congressional intent embodied in

the Clean Water Act." Another commenter noted elimination of the waste exclusion is contrary to the "fundamental goal of the Clean Water Act: to eliminate the discharge of pollutants into the waters of the United States in order to preserve the physical, chemical and biological integrity of the nation's waters.

We agree that the goals of the CWA include the elimination of the discharge of pollutants, but do not agree that today's rule is inconsistent with those goals or with any actual requirements of the Act. First, today's rule does not authorize or permit the discharge of solid waste to waters of the U.S. As provided for by section 301 of the CWA, discharges to waters of the U.S. continue to be prohibited unless a permit under the Act authorizing the discharge is issued. Rather, the rulemaking being undertaken clarifies which permitting regime (section 404 or section 402) would be applicable. Moreover, as explained in the preamble to the proposed rule (65 FR 21293 - 21294), the section 404 program is specifically designed to regulate material that fills waters of the U.S. or changes their bottom elevation, and the 404(b)(1) Guidelines provide for the evaluation of alternatives to avoid or minimize the discharge of fill material. We also note, that in response to comments received, today's final rule modifies the proposal so as to exclude from the definition of fill material trash or garbage.

Several commenters suggest that the proposed elimination of the waste exclusion serves to "endorse the practice of mountaintop removal mining." Another expressed concern that removal of the "prohibition on use of fill that is discharged primarily to dispose of waste" would "greatly increase the uni-

verse of Section 404 regulated activities involving waste disposal."

Section 404 regulates the discharge of dredged or fill material to waters of the U.S., whereas the primary statute governing mountaintop removal mining is the Surface Mining Control and Reclamation Act (SMCRA). Rather than somehow "endorsing" that practice, today's rule ensures regulatory clarity and consistency by clarifying which CWA regulatory regime governs discharges of material that has the effect of fill, and does so in a way that is consistent with EPA's long-standing definition. While today's rule clarifies that mining related discharges with the effect of fill, such as overburden, are subject to section 404, no such discharge may actually take place except as authorized by a 404 permit. In addition, mountaintop mining activities are also subject to SMCRA permitting requirements before they may occur. We also do not believe today's rule will greatly increase the universe of waste disposal activities regulated by section 404 as today's rule is generally consistent with existing practice as well as reflecting the effects-based approach in EPA's long-standing definition. Finally, as noted above, today's final rule does specifically exclude from the definition of fill material trash, garbage or similar materials unless such materials are to be used to create a structure or infrastructure in waters of the U.S.

Another commenter was supportive of the clarification made by the Corps and EPA. Specifically, the commenter noted that, to the mining industry, the term "waste" refers to leftover rock and dirt that is impacted by coal mining activities, and should be regulated under section 404 of the CWA. As stated previously, we believe that in determining whether a

discharge is subject to section 404 or section 402, it is important to provide for application of the regulatory regime best suited to control the potential impacts. These materials both have the effect of-fill and are geological materials similar to many other types of fill material; we thus agree it is appropriate that they be regulated under section 404.

C. Legality of Proposal

1. Consistency with CWA and Regulatory Framework

A number of comments addressed issues about the consistency of the proposal with the CWA, generally, and with the cases and regulatory requirements implementing the Act. Those opposing the proposal argued that it reflected a "major weakening of current law" and undermined the zero discharge goal of the Act. The opponents of the rule noted that the CWA was established to protect the physical, chemical, and biological integrity of the nation's waters from pollution emanating from point as well as non-point sources. Instead, says one comment, the proposal cripples the effectiveness of the Act. An industry opponent of the rule argued that the rule goes well beyond the Corps' jurisdiction over protecting wetlands and other rare and important waters, and now has the Corps asserting jurisdiction over vast areas of desert that have no connection to the Corps mandate. Those supporting the rule argued that the proposal is consistent with the CWA purposes and the regulatory framework for the Act. A supporter noted that it is clear that Congress did not intend to stop mining in this country when the CWA was enacted, which the comment says would be the outgrowth of some of the arguments alleging that the proposal violates the CWA.

The agencies do not agree that the proposal would have resulted in a major weakening of the CWA. In fact, as noted above, the purpose of this regulatory change is to improve the effectiveness of the program by increasing the clarity and consistency of program implementation with the CWA. Today's final rule improves upon the proposal by specifically excluding trash or garbage from the definition of "fill material" and thereby ensuring that the public understands that such materials will generally not be permitted for disposal in waters. It is important to note that neither the proposal nor this final rule affects the scope of geographic jurisdiction. Thus, those comments concerning the scope of geographic jurisdiction are not germane to today's action.

Below we will address some the specific comments concerning the legality of the proposal and this final rule in light of existing regulations and case law.

a. *Section 402 versus section 404.* Numerous commenters noted that, although they agreed with the intent of subsection (e)(2) of the proposed rule (i.e., discharges covered by effluent limitation guidelines and discharges covered by a section 402 NPDES permit do not require a section 404 permit), the proposed language specifically excluding discharges subject to proposed or final effluent limitations guidelines or NPDES permits was ambiguous and confusing. One commenter, representing the mining industry, specifically was concerned that the exclusion, as worded, could inadvertently result in attempts by regulators in the field to have discharges excluded from section 404 coverage simply due to the presence of constituents in the material

for which effluent limitation guidelines exist and would apply if such constituents were discharged in wastewater (e.g., mine drainage or process waste water). Overall, commenters requested clarification of the (e)(2) language, even if such clarification was made in the Preamble to the rule.

Based on the comments received, the agencies recognize the potential for the proposed language to cause confusion and believe such language is unnecessary for achieving the purposes of the rule. Accordingly, today's final rule deletes the exclusion for discharges covered by effluent limitation guidelines and standards or NPDES permits. The agencies, however, will continue to be guided by practices and past determinations about the applicability of effluent limitation guidelines or NPDES permits in deciding whether section 402 or 404 will govern specific discharges. If EPA has previously determined that a discharge is covered by an ELG, that determination is not altered by today's rule. Similarly, even though some discharges covered by section 402, such as suspended or setteable solids can have the effect, over time, of raising the bottom elevation of a water due to settling of waterborne pollutants, we do not consider such pollutants to be "fill material," and nothing in today's rule changes that view.

Some commenters noted that section 404 is better suited to address certain types of discharges because it deals with physically modifying or replacing waters, whereas 402 deals with the discharge of waterborne pollutants and the ability of the receiving waters to assimilate them. Others, however, maintained that, rather than justifying regulation under section 404, the inability of certain discharges to

comply with section 402 requirements simply demonstrates that the CWA was intended to prohibit such discharges. Such comments also questioned the adequacy of Section 404 regulation of waste-type fills, due to inconsistent application of its alternatives analysis and compensatory mitigation requirements. The commenters asserted that the proposed rule constitutes a "dramatic reversal of agency policy" that was not justified simply to eliminate inconsistencies between the Corps and EPA definitions.

Clearly, two regulatory programs were established by the CWA serving distinct objectives and goals. One limits discharges of pollutants in order to protect water quality of the receiving water (section 402 NPDES program). The other regulates dredged and fill activities that, among other things, may displace or change the elevation of receiving water — often replacing it with dry land (section 404). Even though there are some water quality considerations included in the section 404(b)(1) guidelines, this is distinct from the water quality considerations and analysis of the assimilative capacity of receiving waters done as part of the section 402 review. In determining whether the section 402 versus section 404 permit will control specific discharges, the differing purposes of the two programs is an important consideration. Finally, as explained elsewhere and in the Federal Register notice of the final rule, today's rule reflects the approach in EPA's longstanding regulation and is generally consistent with past practice, so does not represent a radical departure for the agencies.

Some commenters also noted that the proposed rule language and preamble discussion created some

confusion about whether mine overburden and mine tailings are both subject to section 404 regulation as opposed to section 402. Today's final rule clarifies that any material that has the effect of fill is regulated under section 404 and further that the placement of "overburden, slurry, or tailings or similar mining-related materials" is considered a discharge of fill material. Nevertheless, if EPA has previously determined that certain materials are subject to an ELG under specific circumstances, then that determination remains valid. Moreover, NPDES permits issued pursuant to section 402 are intended to regulate process water and provide effluent limits that are protective of receiving water quality. This distinction provides the framework for today's rule.

b. *Operation of Water Quality Standards, anti-degradation policies and 404(b)(1) Guidelines.* Two comments raised issues concerning compliance of the proposal with water quality standards and the section 404(b)(1) Guidelines, each arguing opposing conclusions. One comment noted that the Guidelines prohibited discharges that would cause or contribute to violations of water quality standards or that caused or contributed to significant degradation of the waters. This comment noted that while some provisions of the Guidelines contemplated a balancing approach, the above referenced provisions did not. They simply prohibited such actions. Moreover, the comment argued that compliance with both prohibitions was required. In addition, the comment concluded that "filling in waters for the purpose of waste disposal undeniably violates water quality standards and anti-degradation regulations," and as such, is prohibited by the section 404(b)(1) Guidelines. The second comment cited to EPA's Water Quality Standards Handbook and, specifically, to the

discussion of the Anti-degradation policy to reject the concept that "the anti-degradation policy necessarily prohibits filling operations by virtue of altering the use of the stream segment filled." This comment noted that the Handbook observes that compliance with the CWA anti-degradation policy is achieved through the application of the 404(b)(1) Guidelines, and further that any other construction of the anti-degradation policy would effectively eviscerate section 404 of the CWA. This comment also takes exception to the notion that all use of streams for waste assimilation is prohibited. Instead this comment claimed that the prohibition is against the use of streams as open sewers to the exclusion of other beneficial uses. The comment argued that theses issues are likewise resolved by the application of the 404(b)(1) Guidelines.

One commenter stated that the proposed rule will violate the CWA anti-degradation policy and state water quality standards by allowing discharges that destroy existing uses of water bodies or that fail to comply with water quality standards. Another commenter stated that the anti-degradation policy prohibits filling operations, generally; while other commenters noted that such an interpretation would be inconsistent with the intent of the CWA which expressly contemplates filling activities under section 404. Moreover, many commenters stated that any discharge of fill material in waters of the U.S. for purposes of waste disposal is prohibited by the CWA. In addition, some commenters added that such waste material discharges conflict with Federal and State water quality standards which prohibit the use waters of the U.S. for waste assimilation purposes (40 CFR 131.10(a)). Finally, one commenter noted that the current Corps definition of fill material ex-

cludes waste material and thus is regulated under section 402 of the CWA which would prohibit such a discharge.

Questions of whether water quality standards have been violated or the significant degradation standard has been surpassed are decided on a case specific basis, and not simply on the basis of whether the definition of fill material has been met. The assessment of the impacts in a specific case is critical. We do not agree with the broad statements that this rule violates the CWA anti-degradation policies or water quality standards. First, this rule defines a jurisdictional term that simply determines whether a permit under section 402 or 404 must be obtained for a discharge into waters of the U.S.; it does not authorize any specific activities. The issue of whether the anti-degradation policy or water quality standards will be violated in a specific case will have to be determined on the facts. Thus, we do not believe there is any basis to conclude that simply defining certain waste materials as 'fill material' is prohibited under the CWA as a matter of law.

Moreover, while these commenters suggest that the only filling prohibited by the Act is for purposes of waste disposal, in fact, their reading of the anti-degradation policy would effectively prohibit the discharge of any fill material in waters of the U.S. for any purpose, as several other comments noted. The commenters assert that, because the act of filling a water eliminates a portion of waters, it fails to comply with the requirement of EPA's anti-degradation policy to maintain and protect existing uses. If this were a correct reading of EPA's regulation and the Act, all fills in waters of the U.S. would be prohibited, because filling a water has the same effect of

eliminating some portion of it regardless of whether the purpose is waste disposal or some other purpose. As indicated in several of the comments, this result, however, would effectively eliminate section 404 from the statute. We believe that, by establishing a program under section 404 for authorizing discharges of fill material into waters of the U.S., Congress sanctioned the filling or elimination of waters where it can be done in an environmentally acceptable manner, i.e., where consistent with the 404(b)(1) Guidelines. Therefore, we do not believe that these commenters' reading of the statute can be squared with section 404 itself.

In contrast to commenters' strained reading, EPA's longstanding interpretation of the Act and EPA's regulations is consistent with Congressional intent. In 1985, EPA articulated its view that the anti-degradation policy is satisfied in the context of discharges subject to section 404 where a discharge complies with the requirement in the section 404(b)(1) guidelines that it not result in significant degradation of waters of the U.S. ***See Questions and Answers on Antidegradation* (1985); Water Quality Standards Handbook: Second Edition, August 1994. (While the guidance refers specifically to wetlands, its reasoning applies equally to discharges of fill material in any water of the U.S.).** This interpretation does not, like the commenters', effectively read section 404 out of the Act as it relates to fill material. This reading also reasonably squares EPA's anti-degradation policy with the specific environmental criteria applicable to discharges of dredged or fill material that Congress directed to be followed in section 404.

We also believe that commenters are incorrect that defining fill material to include certain waste material somehow violates EPA's water quality standards regulations related to designation of uses by states under section 303(c) of the Act. 40 C.F.R. 131.10(a) states: "In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the U.S." This regulation is consistent with section 303(c)(2)(A) of the Act, in which Congress directed states to designate appropriate uses of their waters, "taking into account their use and value for public water supplies, propagation of fish and wildlife, recreational purposes and agricultural, industrial and other purposes, and also taking into consideration their use and value for navigation." EPA promulgated the language cited above because it believed that Congress intended that states designate uses under section 303(c) to ensure the protection of their beneficial uses, including those listed in section 303(c). Once a state designates a use for a water, the state is also required to adopt numeric or narrative criteria to ensure the protection of those uses. EPA prohibited designating waters for waste assimilation or transport because of concern that such designation would be incompatible with the beneficial uses that Congress sought to encourage states to protect through their water quality standards.

Nothing in EPA's regulation, however, has any bearing on whether a particular discharge is classified as fill material subject to section 404 of the Act, or another pollutant subject to section 402. Instead, EPA's regulation only limits *states'* discretion in adopting designated uses *pursuant to section 303(c)*, which are submitted to EPA for approval under that provision. If a state were to adopt waste transport or

assimilation as a designated use, then, under EPA's regulation, EPA would be required to disapprove that designated use and, if the State failed to adopt an appropriate use, promulgate an appropriate federal use designation.

Commenters' reading of section 131.10(a) takes the provision entirely out of context, for they appear to read it to mean that no discharges may be authorized that would effectively allow transport or assimilation of wastes in waters of the U.S. That was never EPA's intent in adopting 131.10(a), nor could it have been. For example, under section 402 of the Act, EPA and authorized states issue permits for discharges of pollutants into waters of the U.S., in many or most cases for discharges of waste. The permitting authority evaluates, among other things, the effect of the "transportation" and "assimilation" of those wastes on the receiving water, and whether the discharge would comply with designated uses and applicable water quality criteria. Merely because waste is being transported or assimilated into the water does not, however, mean that the discharge violates 131.10(a). If it did, no pollutants could be discharged under the Act at all, a result contradicted by the existence of the Act's permitting schemes. Similarly, under section 404, discharges of waste material such as dredged spoil may be authorized even though the material is being assimilated into a water. Again, the permitting authority evaluates whether the waste discharge complies with water quality standards, but the mere fact that waste is being transported and assimilated into the water does not implicate 131.10(a).

Commenters may believe, in part relying upon the decision in *Bragg v, Robertson*, 72 F. Supp. 2d

642 (S.D. W. Va. 1999), *rev'd*, 248 F. 3d 275 (4th Cir. 2001), that fill material is different in that it may, in certain circumstances, bury portions of streams, in which case the waste material may be so large that it occupies or "assimilates" the entire portion of the stream. Again, EPA's water quality standards regulation merely limits states' discretion in designating uses under section 303, and EPA never intended that this provision directly apply to limit the authority of EPA, the Corps or states in making permitting decisions under sections 402 or 404 of the Act. Even if that provision were somehow directly relevant to the permitting context, commenters' reading cannot be squared with section 404 itself which, as discussed above, expressly contemplates that parties may receive authorization to "fill" waters of the U.S. subject to the Act's environmental safeguards. Fills by definition occupy a portion of a water of the U.S., and in many cases convert the water to dry land. Obviously, where that occurs, a designated use may no longer be met in that portion of the water body. Again, if the commenters' reading of 131.10(a) were adopted, no fills could be authorized in waters of the U.S., a result directly contradicted by the existence of the section 404 permitting program for fill material. As for the concern of some commenters that some fills, such as certain valley fills, are so large that they would eliminate entire portions of streams, that does not change the inapplicability of section 131.10(a) to the permitting process, or the implication of the commenters' reading for undermining the existence of the 404 permitting program. The size of the valley fill is, however, very relevant to the section 404 permitting process in determining whether a particular discharge may be allowed, for the permitting authority must determine that the discharage would not

cause significant degradation of waters of the U.S., and that all appropriate and practicable steps have been taken to avoid, minimize and compensate for the effects of the discharge.

The final rule recognizes that the term "fill material" does not include trash or garbage. If a party discharges material into waters of the U.S. that does not meet the final definition of "fill material," this is a prohibited discharge under CWA section 301 except in accordance with a permit issued under the NPDES program. Several commenters correctly noted that because discharges of this nature would not generally meet state water quality standards designed to protect and maintain the integrity of the nation's waters, the discharge is unlikely to be permitted by the section 402 program.

One commenter noted that currently, the Corps and EPA provide different definitions of the term "fill material." This an appropriate reading of current Corps regulations and illustrates why the Corps and EPA are issuing this rule today. The confusion caused by the differing regulatory definitions needed to be resolved. By establishing a single definition of "fill material," today's rule will ensure proper, consistent and more effective regulation under the CWA and reduce the uncertainty within the regulated community of whether section 404 or section 402 requirements apply to their proposed operations.

2. Consistency with the *Bragg* decision and effect on litigation

Several commenters argued that EPA and the Corps should not be trying to "circumvent" the decision by the District Court in *Bragg v. Robertson*, which stated that coal mine overburden is waste material that, under Corps regulations, is subject to

regulation under section 402 of the CWA, not section 404. One commenter also contended that we should not finalize a rule while the appeal of the *Bragg* decision before the 4th Circuit is pending. Two commenters asserted that the *Bragg* court ruled that the Corps did not have jurisdiction over the discharge of mining waste into waters of the U.S., and several argued that the *Bragg* ruling found such fills to be in violation of the CWA.

This final rule is not designed to circumvent any judicial decisions. Rather, as explained in the proposal, several recent court decisions have concluded that, that despite EPA's longstanding definition of fill material and the Corps' longstanding regulatory practice, regulating certain discharges under section 404 of the CWA was inconsistent with the definition of fill in the Corps' regulations. We believe these decisions reflect the uncertainty caused by differing regulatory definitions of fill material, which we are resolving today. Rather than "circumventing" those decisions, today's rule will ensure that, in the future, the courts have clear regulatory guidance as to how fill material is regulated under the CWA.

Moreover, while those judicial decisions turned on the Corps' regulatory definition of "fill material," they did not address the scope of our authority to revise our regulations in a reasonable manner consistent with statutory mandates. Therefore, while today's rule clarifies the definition of fill material in response to these courts' interpretation of our prior regulations, those decisions do not constrain our authority to adopt today's rule.

As for the status of the *Bragg* case, the Fourth Circuit Court of Appeals has reversed the decision of the District Court and held the claims remaining in

that case were barred by the 11th amendment of the U.S. Constitution. Therefore, the opinion of the District Court, including dicta addressing the definition of fill material under the CWA, has been vacated. On January 23, 2002, the U.S. Supreme Court denied the plaintiffs' petition for Certiorai . In any case, the Fourth Circuit noted that its decision did not affect the District Court's approval of the settlement of the claims in the case against the Federal defendants which, consistent with today's rule, provided for the regulation of coal mine overburden under section 404 of the CWA.

Some commenters reacted to our discussion in the preamble of the proposed rule of the settlement of the *Bragg* litigation, and our discussion of the steps that federal agencies are taking to ensure that adequate environmental controls are placed on valley fills resulting from coal mining operations in West Virginia. The comments included one voicing concern that the proposed rule provided no confirmation that, subsequent to the *Bragg* MOU, the Corps would provide more extensive review of proposed valley fills. Our intent in describing that effort was to highlight that modifying the definitions of fill material in the manner we proposed was consistent with our current practice of regulating valley fills pursuant to section 404 of the CWA. We discussed our current activities regarding coal mine disposal practices in Appalachia to provide background for the public on those activities. However, the manner in which we regulate such fills, as well as any other particular fill activity, is not within the scope of this rulemaking, as the sole issue here is how fill material is defined. The environmental controls placed on any particular activity will be addressed through the section 404 permitting process, not any elements of today's rule.

To the extent commenters are contending that the manner in which we have regulated valley fills demonstrates that such fills should not be regulated under section 404, we disagree. For all the reasons we have stated, we believe that the appropriate test for whether a pollutant is regulated under section 404 as "fill" is whether it has the effect of fill (regardless of its purpose), because under those circumstances the section 404 program is particularly well suited to address the environmental impacts of the discharge.

3. Consistency with the case of *Resources Investment Inc. v Corps*

One commenter characterized the proposed rule as alleviating the jurisdictional uncertainties that arise from the "primary purpose" test, and in the commenter's opinion, were the basis for the Ninth Circuit Court of Appeals' decision in *Resource Investments Incorporated v. U.S. Army Corps of Engineers* (*RII*), 151 F.3d 1162 (9th Cir. 1998). Other commenters, however, contend that the government's application of the *RII* decision in its stated rationale for the proposal ignores an additional holding in *RII*. 151 F.3d 1162 (9th Cir. 1998). Commenters characterized the proposed rule as an attempt to "override" or "overrule" the Ninth Circuit's binding decision upon the government and asserted that any effort to change the result in *RII*, by redefining "fill material," would be improper. Moreover, commenters asserted that to issue the rule, as proposed, would be inconsistent with the concept that federal agencies are required to apply federal law as interpreted by the federal courts in the relevant Circuit. They then argued that the narrow scope of the *RII* decision does not support the government's concerns that an "un-

reasonable end result" may occur should the definition of "fill material" be left as it is. In addition, commenters asserted that to revise the definition of "fill material," as proposed, would be duplicative, as applied to solid waste landfills. One commenter framed this argument as having "profound federalism implications," asserting that, under the revised definition of fill material, both state RCRA-approved programs and Federal 404 authority to permit landfill activities will apply, creating a situation where potentially inconsistent wetland-impact determinations could result. This too, commenters indicated, is inconsistent with the holding in *RII*. Commenters also suggested that the proposed rule is an improper means of resolving disagreements between the federal agencies and the courts.

In the Preamble to the final rule, the agencies addressed *RII* decision in detail, including responses to these comments. That discussion is set forth below.

In *Resource Investments Inc v. Corps*, 151 F.3d 1162 (9th Cir. 1998), the Ninth Circuit held that the Corps lacked the authority to regulate a solid waste landfill in waters of the U.S. The court found that: (1) neither the solid waste itself nor the liner consisting of layers of gravel and low-permeability soil constituted "fill material" under Corps regulations; and (2) because of the potential for inconsistent results if landfills were regulated under both section 404 of the CWA and Subtitle D of RCRA, requiring these facilities to be subject solely to RCRA would "harmonize" the statutes.

We discussed this decision in the preamble to the proposed rule as an example of some of the confusion engendered by the "primary purpose" test. The court

found in *RII* that the liner was not fill material because its primary purpose was not to replace an aquatic area with dry land or change the bottom elevation of a waterbody, "but rather to serve as a leak detection and collection system." 151 F.3d at 1168. We explained in the proposal that fills typically serve some other purpose than just creating dry land or raising a water's bottom elevation and that, if the court's reasoning were taken to its logical conclusion, many traditional fills in waters of the U.S. would not be subject to section 404.

Some commenters objected to our proposal not to follow the decision in *RII* in this rulemaking. They criticized the proposal as an improper attempt to "override" or "overrule" the Ninth Circuit's decision, particularly within the Ninth Circuit where the decision is binding. They also argued that the proposed rule failed to address the potential for duplication and inconsistency in decision-making by State and Federal agencies identified in *RII*.

In our view, these comments raise two distinct issues. The first is whether we should follow the *RII* decision outside the Ninth Circuit and cease regulating discharges associated with the construction of solid waste landfills under section 404. The second issue is whether *RII* precludes us from regulating discharges associated with construction of solid waste landfill structures within the Ninth Circuit, even after today's rule. We address each of these issues in turn.

Regarding the first question, we note first that, after *RII* was decided, we chose not to acquiesce in the decision outside the Ninth Circuit. While we agreed that the solid waste disposal placed in a landfill is not fill material (and such waste continues to

be excluded under today's rule), we believed that the court misapplied the primary purpose test in the Corps' regulations, and that the court's conclusion that RCRA supplanted CWA regulation was contrary to Congressional intent. See *Resource Investments Inc. et al. v. Corps*, No. 97-35934 (Government's Petition for Rehearing and Suggestion for Rehearing En Banc, September 30, 1998). Thus, after the court decided RII, the Corps has continued to issue section 404 permits for the construction of solid waste landfill infrastructures outside the Ninth Circuit.

After considering public comments, we continue to decline to follow the *RII* outside the Ninth Circuit and have, therefore, maintained the approach in the proposed rule to the regulation of solid waste landfills. The revisions to the Corps' definition of fill material in today's rule address the basis for the court's holding that the landfill did not involve the discharge of fill material under section 404. For the reasons explained elsewhere in today's notice, we believe that an effects-based test is the appropriate means of evaluating whether a pollutant is "fill material" and should be regulated under section 404 as opposed to section 402 of the CWA. The placement of berms, liners and other infrastructure (such as roads) associated with construction of a solid waste landfill in waters of the U.S. has the effect of replacing water with dry land or raising the bottom elevation of a water. Therefore, under today's rule, they constitute fill material. Such discharges are indistinguishable from similar discharges associated with other construction activity, which the Corps has always regulated as fill under section 404. *See* 40 CFR 232.2; 33 CFR 323.2 (defining "discharge of fill material," to include "fill that is necessary for the construction of any structure in a water of the U.S.;

the building of any structure or impoundment requiring rock, sand, dirt or other material for its construction; site-development fills for recreational, industrial, commercial, residential and other uses; causeways or road fills; . . ."). We have amended our definition of this term to include the "placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills." That amendment does not change substantively the prior definition, but merely adds solid waste landfills as an example to make clear that it constitutes a "discharge of fill material." Thus, under our new regulations, discharges associated with the creation of solid waste landfill structures clearly constitute "fill material."

To the extent some commenters asserted that revising our regulation was an improper attempt to "overrule" or "override" this holding in *RII*, we disagree. The court's analysis of the "fill material" in *RII* was based entirely on the Corps regulations as they existed at that time, and not upon the interpretation of the CWA itself. Moreover, the CWA does not define "fill material." Therefore, both the statute and the Ninth Circuit's decision leave us the discretion to adopt a reasonable definition consistent with the statutory scheme. We have explained elsewhere why we believe today's definition of fill is reasonable and appropriate under the CWA. To the extent today's rule has the practical effect of "overriding" this aspect of the court's decision in *RII*, that is neither remarkable nor inappropriate, since it is entirely proper for agencies to consider and, if appropriate, revise their regulations in light of judicial interpretation of them.

For purposes of deciding whether to apply the *RII* decision outside the Ninth Circuit, we have also evaluated the second basis for the court's decision — that regulation solely under Subtitle D of RCRA instead of section 404 would "harmonize" the statutes and avoid necessary duplication. We decline to follow that holding both on legal and policy grounds. First, we believe, notwithstanding *RII*, that eliminating the CWA permitting requirement on the grounds that an activity is regulated under RCRA is contrary to Congressional intent in both statutes. Second, we do not agree with the court that regulation under Subtitle D and section 404 would constitute unnecessary duplication, in light of the distinct purposes served by these authorities, the differing Federal roles under the two statutes, and our clarification in today's rulemaking of our intent to give all appropriate deference to State RCRA decision-making in the section 404 permitting process.

We first do not agree with the court's legal reasons for concluding that regulation under Subtitle D of RCRA supplants CWA regulation. The CWA prohibits the discharge of any pollutant into waters of the U.S. without a permit under the Act. *See* CWA section 301(a). Even though an activity associated with a discharge may be regulated under other Federal or State authorities, we believe there is not any basis to conclude that such regulation by itself makes section 301(a) of the Act inapplicable to a discharge of a pollutant into waters of the U.S. In effect, the court concluded that enactment of a regulatory scheme under Subtitle D of RCRA impliedly repealed the statutory permit requirement under the CWA. But "the intention of the legislature to repeal must be clear and manifest." *Radzanower v. Touche Ross & Co.*, 426 U.S. 148, 154 (1976), and the court must

conclude that the two acts are in irreconcilable conflict or that the later act covers the whole subject of the earlier one and is clearly intended as a substitute. *Id.* The court in *RII* did not, and could not, make these findings.

In fact, Congress itself made precisely the opposite findings when it enacted RCRA. Section 1006(a) states:

> Nothing in this chapter shall be construed to apply to (or to authorize any State, interstate, or local authority to regulate) any activity or substance which is subject to the [CWA] except to the extent such application (or regulation) is not inconsistent with the requirements of [the CWA].

This provision precludes regulation of solid waste landfills under Subtitle D in a manner inconsistent with the requirements of the CWA. In our view, it is plainly "inconsistent" with the requirements of the CWA to hold that regulation under RCRA eliminates CWA permitting requirement altogether.

Instead, the court relied upon certain Corps regulations, statements by Corps officials and a 1986 interagency MOA. The court first stated that applying section 404 to solid waste landfills was "unreasonable because there would be "potentially inconsistent results" where both the State and the Corps were applying the same criteria in regulating solid waste landfills. 151 F.3d at 1169. The court held that this "regulatory overlap is inconsistent with Corps regulations stating that 'the Corps believes that state and federal regulatory programs should complement rather than duplicate one another.'" 33 CFR 320.1(a)(5). In addition, the court

cited statements by the Corps in a 1984 letter to EPA stating that EPA was in a better position than the Corps to regulate solid waste landfills. Finally, the court cited the 1986 MOA between the Corps and EPA.

However, none of these "authorities" purport to modify the statutory permitting requirements of the CWA, nor could they. The Corps' regulation cited by the court is simply a statement of the Corps' policy objective of working in concert with State regulatory programs, an important and continuing Corps objective that was discussed previously. The Corps' letter and the MOA reflected our efforts to manage our programs in light of our differing definitions of fill material, but did not speak to the CWA statutory permitting requirement. The court also misconstrued the 1986 MOA entered into by EPA and the Corps as indicating we intended to make the regulation of solid waste facilities within "the sole purview of the EPA and affected states" after EPA promulgated certain Subtitle D regulations. 151 F.3d at 1169. In fact, we stated,

> EPA and Army agree that consideration given to the control of discharges of solid waste both in waters of the United States and upland should take into account the results of studies being implemented under the 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA), signed into law on November 8, 1984. . . .
>
> Unless extended by mutual agreement, the agreement will expire at such time as EPA has accomplished specified

> steps in its implementation of RCRA, at which time the results of the study of the adequacy of the existing Subtitle D criteria and proposed revisions to the Subtitle D criteria for solid waste disposal facilities, including those that may receive hazardous household wastes and small quantity generator waste, will be known. In addition, data resulting from actions under the interim agreement can be considered at that time.

It should be noted that this MOA is about the regulation of solid waste disposal, not about the construction of infrastructure, including solid waste landfill infrastructure, that involves discharges of fill material to waters of the U.S. Further, we did not address in the MOA how solid waste landfills would be regulated after EPA completed its study and certain RCRA regulations, but said only that these developments would "be taken into account" as we decided how to address these discharges in the future. Thus, in addition to the inability of the agencies as a legal matter to modify the CWA statutory permitting requirement through an MOA, we expressly reserved any judgment about the appropriate regulatory approach to be taken after certain actions were taken under RCRA. Also, contrary to the court's conclusion, we have viewed the MOA as remaining in effect after EPA submitted its report to Congress and promulgated Subtitle D regulations in 1991. See Memorandum of John F. Studt, U.S. Army Corps of Engineers, May 17,1993 (stating "the subject MOA remains

effective in its entirety until further notice" and noting that this position was coordinated with EPA).

We conclude, therefore, that it would be contrary to the language and intent of both the CWA and RCRA to conclude that RCRA subtitle D supplants the CWA permitting requirement for discharges into waters of the United States associated with the construction of solid waste landfills. The different Federal roles in the permitting schemes in these statutes supports this conclusion. Subtitle D provides that each State will "adopt and implement a permit program or other system of prior approval and conditions" to assure that each solid waste management facility within the State "will comply" with criteria established by EPA for the siting, design, construction, operation and closure of solid waste landfills. RCRA section 4005(c)(1)(B). States are required to submit permit programs for EPA to review and EPA is required to "determine whether each State has developed an adequate program" to ensure compliance with EPA's Subtitle D regulations. RCRA section 4005(c)(1)(B) and (C). However, RCRA does not grant to EPA authority to issue permits for solid waste landfills, review State permitting decisions or enforce Subtitle D requirements in States with approved programs. The court in *RII* appeared to misunderstand EPA's authorities under Subtitle D of RCRA when it stated that EPA would be the permitting authority in the absence of an approved State program. *See* 151 F.3d 1169 ("we hold that when a proposed project affecting a wetlands area is a solid waste landfill, the *EPA* (or the approved state program) ... will have the permit authority under RCRA.") (Emphasis added); 151 F.3d at 1167 ("RCRA gives the EPA authority to issue permits for the disposal of

solid waste, but allows states to substitute their own permit programs for the federal program if the state program is approved by EPA."). While this authority exists with regard to disposal of hazardous waste under Subtitle C of RCRA, EPA does not have this authority with regard to disposal of non-hazardous solid waste under Subtitle D.

In contrast, the CWA requires either a Federal permit for discharges of pollutants into waters of the U.S., or issuance of a permit by a State/Tribe with an approved program, subject to EPA's authority to object to a permit where EPA finds it fails to meet the Guidelines and requirements of the CWA. CWA sections 402(d); 404(j). EPA also has authority under the CWA to enforce conditions in Federal or State permits under the Act. CWA section 309.

These contrasting statutory schemes support the conclusion that eliminating CWA authority over discharges of fill material associated with construction of solid waste landfills would mean a significant departure from the statutory structure created by Congress in the CWA, a scheme which Congress expressly sought to preserve when it adopted RCRA. *See* RCRA section 1006(a). This does not mean that we view the Federal role as one of second-guessing every decision made by State regulatory authorities under RCRA. To the contrary, both RCRA and the CWA reflect a strong presumption in favor of State-administered regulatory programs. As discussed elsewhere, we intend to rely on State decision-making under RCRA to the extent allowed under current law and regulations. However, we believe that eliminating a Federal role entirely on these matters is neither appropriate nor consistent with Congressional intent under RCRA or the CWA.

Thus, we decline to follow the decision in *RII* outside the Ninth Circuit because we conclude there is not an adequate legal basis on which to conclude that discharges of pollutants associated with solid waste landfills no longer need to be authorized by a CWA permit solely because the project receives a permit under Subtitle D of RCRA.

We nonetheless share the basic policy perspective expressed by the court in *RII* about the need to avoid unnecessary duplication and potential inconsistent application of regulatory programs under the CWA and RCRA. In fact, RCRA expressly vests EPA with the responsibility to "integrate all provisions of [RCRA] for purposes of administration and enforcement and [to] avoid duplication, to the maximum extent practicable, with the appropriate provisions of the . . . [CWA]. . . . Such integration shall be effected only to the extent that it can be done in a manner consistent with the goals and policies of this chapter and the CWA. . . ." RCRA section 1006(b). EPA has sought such integration first by promulgating location restrictions for landfills that are consistent with the criteria for issuance of section 404 permits. See 40 CFR 258.12; 230.10. Among other requirements, a landfill may not be located in wetlands unless it is demonstrated to the State that there are not less environmentally damaging practicable alternatives, the facility will not cause significant degradation of wetlands, and that appropriate and practicable steps have been taken to mitigate the loss of wetlands from the facility. However, EPA never purported to substitute Subtitle D regulation for the CWA permitting requirement, a result that would violate both section 1006(a) and (b). Instead, the Subtitle D RCRA regulations make clear that owners or operators of municipal solid waste landfills "must comply

with any other applicable Federal rules, laws, regulations, or other requirements." 40 CFR .2583. At the time EPA promulgated this regulation, the agency expressly noted that such requirements include those arising under the CWA. See 56 FR 51042 (October 9, 1991).

We do not believe, however, that the Subtitle D and section 404 programs are redundant. Rather, each program has a distinct focus. The State RCRA permitting process addresses a much broader range of issues, including technical operating and design criteria, ground water monitoring, corrective action, closure and post-closure care and financial assurances. In contrast, the section 404 process is focused exclusively on the impacts of discharges of fill material on the aquatic ecosystem, and ways of ensuring that those impacts are avoided, minimized and compensated. Because of the Corps' expertise in protecting aquatic ecosystems, we have found that State RCRA permitting agencies often incorporate by reference the requirements of section 404 permits. (For example, the State RCRA permit for the *RII* landfill required the applicant to implement the wetlands and mitigation plan to be approved by the Corps through the 404 permit process.) We believe that, in these and other ways, State and federal permitting authorities can create efficiencies by relying on each other's expertise in making regulatory decisions.

We intend to make additional efforts to avoid unnecessary duplication in the Federal and State permitting process. As explained in section II.C of this final preamble, we intend that the Corps will rely on decisions by the State RCRA authority about the siting, design and construction of solid waste

landfills in waters of the U.S. to the extent allowed by law and regulations. Appropriate deference to State decision-making will help avoid duplication, while still ensuring that the Corps fulfills its responsibilities to authorize discharges of fill material associated with solid waste landfills in accordance with CWA requirements.

This does not mean that, in every single case, State and Federal decision-makers will agree on whether a particular project or configuration is environmentally acceptable. Nevertheless, instances of disagreement have been rare. We intend to further enhance our efforts to ensure effective coordination between state and federal officials. However, we do not agree with the court in *RII* that the only way to avoid unnecessary duplication is to eliminate the CWA permitting requirement altogether.

We next address commenters' assertions that the decision in *RII* continues to preclude us from regulating solid waste landfills under section 404 within the Ninth Circuit These comments also argue that, given the 'statutory' basis for the court's decision, we cannot change the result in the Ninth Circuit through this rulemaking.

As noted above, the court construed administrative materials of the Corps and EPA as supporting the conclusion that the agencies did not intend to regulate solid waste landfills under section 404 of the CWA. In light of this agency intent, the court concluded that subjecting landfills to regulation solely under RCRA would "harmonize" the statutes and "give effect to each [statute] while preserving their sense and purpose." 151 F.3d at 1169. The court found that this harmonization "is consistent with the sense of the CWA that discharges of solid waste ma-

terials are beyond the scope of section 404 . . . and avoids unnecessary duplication of federal and state efforts in the area of wetlands protection." *Id.*

We again emphasize the distinction between "discharges of solid waste material," as referenced by the court and discharges of fill material associated with the construction of infrastructure. In this rulemaking, we have clarified that discharges having the effect of raising the bottom elevation of a water or replacing water with dry land, including fill used to create landfills such as liners, berms and other infrastructure associated with solid waste landfills are discharges of fill material subject to the section 404 program. Therefore, we have altered the landscape as understood by the court in *RII* (i.e., that these facilities were entirely outside the intended purview of section 404). We do not agree with commenters who argued that there was a "statutory" basis to the court's decision in the sense that the holding of the decision turned on an interpretation of Congressional intent in the CWA or RCRA. The court did not cite any provision of the CWA or RCRA to support its conclusions. Rather, the court derived the "sense and purpose" of the CWA based on agency regulations, guidance and correspondence. By clarifying the scope of section 404 authorities in this rulemaking, we have altered the "sense and purpose" of the CWA underlying the court's conclusion that regulation solely under RCRA would "harmonize" the statutes. Because the premises before the court have changed, we do not view the court's decision as continuing to bar the regulation under section 404 of discharges associated with solid waste landfills within the Ninth Circuit. At a minimum, today's rule calls into question the continuing vitality of the court's reasoning and conclusions and, should a case be brought within

the Ninth Circuit challenging our authority to regulate solid waste landfills, we would ask the court to address the question anew in light of the clarification of our authorities in today's rule.

4. Consistency of Proposal with Past Policy, 1986 Solid Waste MOA, and Other Agency Documents

Some commenters questioned the adequacy of the agencies' basis for what they perceived as a change in policy. They viewed the elimination of the waste exclusion from the Corps' definition as representing an unexplained and drastic departure from existing regulations and agency policy. Other comments viewed the proposed rule as a drastic change in policy intended to avoid any more challenges to valley fills and coal mine waste disposal. They asserted that it was clear waste disposal is not allowable under the Corps' definition of fill material and that activities whose primary purpose is waste disposal are subject to Section 402, and not Section 404.

We do not agree that the proposal reflects a drastic change in policy. Rather, the rulemaking is intended to ensure a clear, effective, and consistent regulatory approach with regard to materials that have the effect of fill by providing a single consistent definition of the terms "fill material" and "discharge of fill material." The rule does this by embodying elements of both EPA's and the Corps' previous definition of fill material, while reconciling the differences between them. Commenters asserting a drastic policy shift point to the changes in the Corps' definition of fill material (33 CPR 323.2(e)(2001)). Today's rule (by use of an effects-based test to define fill material) reflects the existing approach already

used under EPA's definition (40 CFR 232.2 (2001)), which has been in place since 1977. Moreover, the issue being addressed is not solely what materials should be subject to Section 404 permitting authority, but also the appropriate scope of Section 402 permitting. EPA is the agency assigned responsibility for administering Section 402, and under the existing EPA definition, material that has the effect of fill, *regardless of the purpose of the discharge*, is deemed fill material, and as such is not regulated under the Section 402 program. See, 33 USC 1342(a)(1). As was explained in the proposed rule's preamble, the rulemaking is intended to reconcile the differing Corps *and* EPA definitions in a manner consistent with the statutory scheme (see 65 FR 21293-21294) and that resolves regulatory uncertainties resulting from the differing definitions (see 65 FR 21294- 21295).

Others expressed concern that the proposal would place the Corps, rather than EPA, in primary control of waste disposal in waters of the U.S., believing that the proposal would dramatically enlarge the range of Section 404 regulated activities involving waste disposal. They noted that the proposal not only would have eliminated the Corps' definition's "primary purpose" test (i.e., whether the material is used for the primary purpose of creating dry land or elevating the water body bottom), but also that definition's exclusion of pollutants primarily to dispose of waste.

Today's rule does not alter jurisdiction under the Section 402 program as it reflects an effects-based approach to defining fill material that is similar to that currently used by EPA. We thus do not agree it somehow alters responsibilities to make the Corps

the primary agency in charge of waste disposal under the CWA. We also note that modifications have been made to the proposal in response to comments received expressing concern over the proposal's elimination of the Corps definition's waste exclusion. In particular, today's rule has been modified to provide an explicit exclusion from the definition of "fill material" for trash, garbage or similar materials unless such materials are to be used to create a structure or infrastructure in waters of the U.S., such as a berm or artificial reef. That modification narrows the proposal's scope of what constitutes "fill material." Thus, even more so than the proposal, the rule adopted today does not reflect a policy change putting the Corps primarily in charge of waste disposal.

Another comment suggested inconsistency of the proposal with the statement in the proposed rule preamble that "waters of the U.S. should not be polluted by discharges of solid waste, which is generally not a suitable or appropriate form of 'fill material,' for a variety of reasons." (65 FR 1296). The commenter did note the preamble explained the proposed changes comport with existing practice, but asserted that existing practices violates the law. They claimed the rule was being changed to overturn part of the ruling in *Bragg* finding that issuance of 404 permits for the discharges at issue was illegal, in an attempt "to allow the destruction to continue."

We do not agree that the proposal or today's rule is inconsistent with the preamble statement. First, neither the proposal nor today's rule have the effect of authorizing or permitting the discharge of solid waste to waters of the U.S. As provided for by Section 301 of the CWA, discharges to waters of the U.S.

remain prohibited unless a permit under either Section 404 or 402 authorizing the discharge is issued. Rather, the rulemaking being undertaken clarifies what regulatory regime (Section 404 or 402) would be applicable. Moreover, as explained in the preamble to the proposed rule (65 FR 21293 - 21294), because the Section 404 program is specifically designed to regulate material that fills waters of the U.S. or changes their bottom elevation, whereas Section 402 is primarily designed to regulate sewage and industrial effluents, we believe Section 404 is the environmentally preferable permitting regime to apply. In response to comments received, we also have modified the proposal in today's final rule to exclude from the definition of fill material trash, garbage or similar materials unless such materials are to be used to create a structure or infrastructure in waters of the U.S.

With regard to assertions that existing practices do not comport with the law and that the rule is motivated by an intent to overturn the *Bragg* decision, we note the *Bragg* court actually approved a settlement agreement resolving claims against the Federal defendants, under which overburden from valley fills would continue to be subject to Section 404, and determined that settlement agreement "accords with the law." See 54 F. Supp 653, 665. A subsequent October 1999 Memorandum Opinion and Order in the *Bragg* case (addressing SMCRA claims against the State defendants) contained language that does question the applicability of Section 404 to mining overburden in light of the Corps' regulations' primary purpose test. However, as explained in the proposed rule's preamble (65 FR 21295), that language was obiter dicta rather than a holding of the Court. Moreover, on April 25, 2001, that October

1999 Memorandum Opinion and Order was **vacated** by the U.S. Circuit Court of Appeals for the Fourth Circuit, which determined the underlying claims against the State defendants were barred by the 11th Amendment of the U.S. Constitution. **248 F..3d 275 (4th Cir, 2001); that Fourth Circuit decision left intact the 1998 settlement agreement. See 248 F.3d at 288, n.1 (noting District Court's approval of the settlement agreement).** We thus do not agree that existing practices do not comport with the law. See also, *Avoyelles Sportsmens League v. Marsh*, 715 F. 2d. 897, 924-925 (5th Cir. 1983) (endorsing use of an effects-based test for determining what constitutes fill material subject to Section 404). Finally, with regard to assertions that the proposal was somehow motivated by a desire to "overturn the *Bragg* decision' we further note that the proposed rule preamble explained in detail the various regulatory uncertainties and confusion arising from the differing Corps and EPA definitions of fill material and the environmental, legal, and programmatic reasons why there was a need to reconcile those differences. 65 FR 21294 -21295.

Another commenter stated that the volume of a single stream fill can be as much as up to 250 million cubic yards with stream burials up to 2 miles long, and that from 1986 to 1998, at least 900 stream miles were filled with excess spoil and coal mining waste in Pennsylvania, Kentucky, West Virginia and Virginia. The commenter concluded from this that Section 404 permits are rarely denied and the 404(b)(1) protections that the proposed rule preamble refers to as sufficiently protective of the aquatic environment are not if a standard that allows no "significant effect" allows the complete burial of miles of streams. This commenter also noted that the

proposal would have added "placement of coal mining overburden" to the definition of "discharge of fill material," and indicated this was contrary to *West Virginia Coal Assn. v. Reilly*, 728 F. Supp. 1276, 1281 (S.D.W.Va. 1989), and that the agencies had not clarified why amending the regulatory definitions makes more sense than refining the MOA's list of mining wastes already disposed of under Section 402, pursuant to EPA regulation. Another commenter also pointed to the definition of "discharge of fill material" in 33 CFR 323.2(f), noting that the examples listed in that definition are all constructive and do not include waste disposal.

While we agree that the length of streams filled by valley fills can be substantial, we do not agree that this leads to a conclusion that such fills or other such wastes would be better regulated under Section 402 rather than 404. With regard to *West Virginia Coal Assn*, that decision involved issues arising under the regulations existing at the time of the decision (i.e., with the differing Corps and EPA definitions)and the 1986 MOA that was based on those regulations; it neither held or suggested that the regulations could not be changed or clarified so as to reconcile those differences. With regard to suggestions of further refining the MOA as to regulation of mining waste under Section 402 or application of Section 402 in lieu of Section 404, we note that Section 404 is better designed to address impacts associated with filling of waters of the U.S., as it provides for evaluation of impacts on aquatic ecosystems, consideration of practicable alternatives to avoid impacts, consideration of measures to minimize impacts, and mitigation of unavoidable impacts. In contrast, Section 402 primarily relies on use of end of pipe technology and water quality based stan-

dards. These considerations were explained in detail in the proposed rule preamble (65 FR 21293 -21294), and we believe amply support a conclusion that application of Section 404 to regulate materials with the effect of fill is reasonable and environmentally protective.

We do believe that the agencies should continue to look for improvement in Section 404 program implementation related to valley fills and have undertaken a number of measures to that end. These include an April 1999 Memorandum of Understanding between the Office of Surface Mining, the Fish and Wildlife Service, EPA, the Corps, and the State of West Virginia that describes discharges that the signatory agencies believe generally should have only a minimal effect on waters of the U.S., development of technical models to help minimize the size of proposed coal overburden discharges, and initiation of development of a comprehensive EIS to assess current federal and state authorities for regulating coal mining discharges in Appalachia and what measures may be necessary to ensure protection of human health and the environment. A draft of that EIS is anticipated to be available for public comment on August 2002. In addition, Nationwide Permit 21 was revised and reissued on January 15, 2002, with improvements to its mitigation provisions and a requirement not only for pre-construction notification to the Corps but also written authorization from the Corps before the project can proceed. See discussion of Nationwide Permit 21 at 67 FR 2038- 2043.

Another comment took issue with the proposal's preamble language (65 FR 21294) that explained it was problematic for the Corps to make subjective determinations about the primary purpose of a

prospective discharge. The comment suggested this difficulty would be eliminated if the regulations made it clear that the Corps and EPA (and not the project applicant) are to make an independent determination.

We do not agree that the difficulties described in the preamble can be resolved by simply having us make an independent determination of the primary purpose of a prospective discharge. First, we believe it preferable to apply the regulatory regime that is best fitted to address the *effects* of the particular discharge, rather than assigning regulatory responsibility on the basis of project purpose. For discharges with the effect of fill, as explained above, we believe the appropriate regulatory regime is Section 404. Moreover, an independent determination by the agencies would not resolve difficulties arising under the primary purpose test. For example, in *RII* (discussed in the proposal's preamble at 65 FR 21294), the Corps determined that a discharge of fill material was involved, as the primary purpose of the discharge associated with construction of the landfill was to replace waters of the U.S. with dry land or alter the bottom elevation. The Court however interpreted the primary purpose test on its own to come to a different conclusion, finding the liner was not fill material because its primary purpose was not to replace an aquatic area with dry land or change the bottom elevation of a waterbody, "but rather to serve as a leak detection and collection system." 151 F.3d at 1168.

A number of comments were received questioning the consistency of the proposed rule with the 1986 "Memorandum of Agreement Between the Assistant Administrators for External Affairs and

Water U.S. Environmental Protection Agency and the Assistant Secretary of the Army for Civil Works Concerning Regulation of Discharges of Solid Waste Under the Clean Water Act" ("1986 MOA") and related agency documents.

Some of these commenters generally pointed to the 1986 MOA and the "primary purpose test" in the Corps definition of fill material as presenting a strong argument that materials are prohibited under the Section 404 program when they are "pollutants" being discharged into a water of the US "primarily to dispose of waste," and thus should be regulated under Section 402 of the Act by EPA as a point source discharge.

The 1986 MOA is intended to provide guidance to the Corps and EPA on how to determine the applicability of Section 404 or 402 to solid waste discharges in light of the differing EPA and Corps definitions of fill material. Because it is only guidance, it cannot and does not establish legally binding requirements, nor is it prescriptive in nature. It provides factors to be considered when making the determination of which permitting regime to apply, but does not direct or instruct how the factors are to be considered or balanced to reach a conclusion. In fact, it explicitly recognizes that there will be cases where application of the factors it contains will not provide a clear answer, or the agencies may disagree as to which permit regime should be applied. 1986 MOA, Section C. 1 and 2. As explained in the proposed rule preamble (65 FR 21297), and will be addressed further below, we believe the approach being taken in reconciling the regulations is generally consistent with the 1986 MOA.

With regard to the Corps regulations defining fill material, those regulations provide in part:

> The term "fill material" means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of an waterbody. The term does not include any pollutant discharged into the water primarily to dispose of waste, *as that activity is regulated under Section 402 of the Clean Water Act.* 33 CFR 323.2(e) (2001) (emphasis added)

Under EPA's long standing definition of what constitutes fill material (and thus *not* subject to Section 402 (see CWA Section 402(a)(1)), fill material is defined as material that has the effect of fill, without regard to the purpose of the discharge. We thus do not agree that under the differing EPA and Corps regulations it is simply clear by referring to the Corps regulations alone that pollutants discharged to dispose of waste are not subject to Section 404; rather, the contents of *both* regulations need to be taken into account. Moreover, as noted in the prosed rule's preamble (65 FR 21295) the Corps has historically regulated valley fills under Section 404.

Some of the comments pointed to specific language in the 1986 MOA as indicating that mine waste was properly the subject of Section 402 and not Section 404. Several of these commenters cited Section B.5. of the 1986 MOA. That provision states:

> "On the other hand, in the situation in paragraph B.3, a pollutant (other than dredged material) will normally be considered by EPA and the Corps to be subject to Section 402 if it is discharged

> in liquid, semi-liquid, or suspended form or if it is a discharge of solid material of a homogeneous nature normally associated with single industry wastes, and from a fixed conveyance, or if trucked, from a single site and set of known processes. These materials include placer mining wastes, phosphate mining wastes, titanium mining wastes, phosphate mining wastes, titanium mining wastes, sand and gravel wastes, fly ash, and drilling muds. As appropriate, EPA and the Corps will identify additional such materials."

These commenters saw the proposed rule as a repudiation of that provision. Some of these comments further pointed to a cover memorandum from Lawrence Jensen, then-Assistant Administrator of the Office of Water, to Regional Administrators transmitting the 1986 MOA which stated wastes of a homogenous nature normally associated with a single industry and discharged from a fixed conveyance, or if trucked from a single site such as fly ash, are subject to the Section 402 program.

As explained previously, under today's rule, we will continue, consistent with our long-standing practice, to rely on the existence of effluent limitation guidelines or standards or an NPDES permit to inform the determination of how a particular discharge is regulated under the Act. If a specific discharge is regulated under Section 402, it would not also be regulated under Section 404, and vice versa. As explained in the proposed rule's preamble (65 FR 21296), many of the discharges referred to in Section B.5. of the 1986 MOA are subject to effluent

guidelines and NPDES permitting, and today's rule would not alter that existing scheme. Moreover, when Section B.5. of the 1986 MOA was adopted, the EPA regulations defining fill material, like today's rule, defined fill material as material that has the effect of replacing waters of the U.S. with dry land or changing the bottom elevation. We thus do not agree that today's rule is inconsistent with or repudiates that 1986 MOA provision.

One of the commenters further indicated that the 1986 MOA outlined four factors for determining whether a specific waste was properly regulated under Section 404 or Section 402, stating that each factor, if it applied to the material at issue, meant that the material should be regulated under Section 404. The commenter concluded that three of the four factors listed in the 1986 MOA (Sections B.4.a, b, and d) weighed in favor of overburden being regulated by EPA under Section 402, with only one factor (Section B.4.c) weighing in favor of Section 404.

We do not agree that only one factor in Section B.4 of the 1986 MOA weighs in favor of regulating overburden under Section 402 as the commenter asserts. With regard to the comment's suggestion that Sections B.4.a, b, and d weigh in favor of overburden being regulated under Section 402, we note that Section B.4.d refers to heterogenous discharges of the type "normally associated with sanitary landfills," and thus appears inapplicable in the case of overburden rather than affirmatively indicating it is subject to Section 402. With regard to Section B.4.b., overburden consists of rock and dirt and thus is similar in nature to materials generated by construction-type activities, such as road cuts that generate waste rock and dirt. The 1986 MOA does not specify how to

weigh and balance the various factors it contains, and as noted above, Section C of the 1986 MOA explicitly recognizes this and calls for inter-agency discussions when the factors specified in the MOA do not resolve the issue.

Other comments questioned the status of the 1986 MOA, indicating that it was intended to provide only interim section 404 jurisdiction and pointing to language in Section E.2. as indicating it expired when EPA's RCRA Subtitle D regulations were published in 1991. Some of these comments pointed to the *RII* decision as supporting that view. One of these comments focused on issues related to the applicability of Section 404 to solid waste landfills, asserting that the discussion in the proposed rule preamble of the 1986 MOA between EPA and the Corps regarding the "temporary" assertion of jurisdiction over landfills by the Corps was inaccurate and misleading. This commenter further indicated that in a case asserting a temporary regulatory taking of a landfill by the Corps of Engineers, both former and existing Corps officials have testified under oath that the MOA was intended to impose interim jurisdiction only until the states took over their solid waste responsibilities under RCRA Subtitle D. The commenter concluded that it was simply untrue that the Corps' "consistent intent" has been to regulate solid waste landfills.

We note that by its very title the1986 MOA concerns "regulation of *discharges of solid waste*" (emphasis added), not the broader question of Section 404 jurisdiction over other landfill activities, such as their construction or maintenance. It thus does not have a bearing on Section 404 jurisdiction over discharges of material used to create landfill in-

frastructure such as berms, liners, and the like, which under both of the differing Corps and EPA definitions are fill material. Further, Section A.5 of the 1986 MOA describes the basis of the agreement, indicating the MOA addresses "the uncertainty as to whether Section 402 of the Act or Section 404 is intended to regulate discharges *of solid waste materials into waters of the United States for the purpose of disposal of waste* . . ." (emphasis added). Because it addresses only solid waste discharges, we do not agree that the 1986 MOA reflects an intent to assert "interim jurisdiction over solid waste landfills by the Corps."

Moreover, in the preamble to the rule adopting the primary purpose test and waste exclusion, the Corps specifically recognized that jurisdiction under that regulation still remained for creation of landfill infrastructure:

> "During the two years of experience with the Section 404 program, several industrial and municipal discharges of solid waste materials have been brought to our attention which technically fit within our definition of "fill material" but which were intended to be regulated under the NPDES [CWA § 402 permit] program. * * *
>
> The Corps and [EPA] feel that the initial decision relating to this type of discharge should be through the NPDES program. We have, therefore, modified our definition of fill material to exclude those pollutants that are discharged into water primarily to dispose of waste. *We will process Section 404*

> *permits for these types of activities to the extent that a levee or other type of containment structure must be placed in the water as part of the overall disposal plan.*"
>
> 42 F.R. 37,122, 37,129 (July 19, 1977) (emphasis added).

Similarly, the proposed rule was intended to recognize as a discharge of fill material "placement of material for construction or maintenance of . . . infrastructure associated with solid waste landfills" (65 FR 21300). It would not have asserted Section 404 jurisdiction over actual solid waste going into the landfill cells, and as noted elsewhere, today's rule has been modified to specifically exclude disposal of trash garbage and the like from being fill material. In addition, as explained Section II C. of today's preamble, in implementing Section 404, the Corps will emphasize effective coordination with other relevant programs such as RCRA, and consistent with its legal responsibilities, rely as appropriate, on the information developed and conclusions reached by other agencies to support the decisions required under that program. Readers are also referred to the previous discussion in today's preamble for issues related to the applicability of Section 404 to landfills and the *Resource Investment* case.

With regard to the status of the 1986 Solid Waste MOA, we also do not agree that it has expired. Section 5.E.2. of the 1986 MOA provides it may be extended by mutual agreement, and both EPA (58 FR 9337) and the Corps (May 17, 1993, memorandum from John Studt, Chief Regulatory Branch, U.S. Army Corps of Engineers) have indicated the MOA remains in effect.

One commenter stated that the 1986 MOA contains language that is potentially confusing and inconsistent with the proposed rule and the accompanying preamble and recommended that while they believed the 1986 MOA contains some provisions worth maintaining, it also contains others that should be reworked consistent with the proposed rule and current permitting practices. This commenter pointed to Section B.4.d of the 1986 MOA as providing that a discharge will normally be considered to meet the definition of "fill material' if heterogeneous in nature and of the type normally associated with sanitary landfill discharges, whereas in the preamble to the proposed rule, the agencies proposed to adopt a definition of "unsuitable" fill material that would include in most instances "heterogeneous solid waste," thereby excluding from the Section 404 permit program materials that would satisfy the language in Section B.4.d of the 1986 MOA. This commenter also pointed to Section B.5 of the 1986 MOA (which addresses "solid material of a homogeneous nature normally associated with single industry wastes") as resulting in confusion and inconsistent positions for materials generated by hard rock mining.

We agree that in many respects the 1986 MOA did not fully resolve issues associated with the discharge of solid waste. This is not surprising as it was developed under a regulatory framework involving differing definitions of fill material, and as guidance, could not depart from those regulations or establish mandatory or prescriptive criteria. Following promulgation of today's rule which results in a single and consistent definition of fill material, we will be revisiting the 1986 MOA to determine if it is still

necessary, and if so, what modifications might be appropriate.

One commenter opposing the proposed rule requested that if it nonetheless is issued, language in Section B.6. of the 1986 MOA be retained, which provides for a State determination to be provided prior to application processing that the proposed discharge will comply with applicable provisions of State law, including applicable water quality standards. The commenter indicated this was necessary in order to keep Corps districts from becoming immersed in disputes over siting of wasting facilities.

We will take this comment into account in reviewing the 1986 MOA. We also note that Section 401 of the CWA itself requires any applicant for a Federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification from the State as to compliance with applicable provisions of State law, including applicable water quality standards. With regard to Section 404 permits, the Corps has in place regulations addressing the nature and timing of such 401 certifications. See e.g., 33 CFR Part 320.

One commenter provided lengthy historical information asserting that the proposed rule's preamble description of how the differing definition of "fill material" came into being incorrectly ascribing this divergence to actions by the Corps. We appreciate submission of this information, but note that the preamble language in question (65 FR 21294) was intended only as brief background chronology, not to explain how the definitions came to differ.

Other comments pointed to a March 19,1984, letter from William R. Gianelli, then Assistant Secretary of the Army for Civil Works, to William

Rucklelshaus, then Administrator of EPA, which was cited in the *RII* case at 151 F.3d 1169. These comments pointed to language in that Department of Army letter stating:

> "This follows up on discussions our agencies have had over the years about the proper way to regulate garbage disposal and other waste disposal in waters of the United States.
>
> EPA has many solid waste responsibilities under its RCRA programs and has developed expertise in that area. Army has very limited expertise. Hence we would have to establish duplicative expertise which may well result in policies and technical decisions which differ from those of EPA. It would not be in the best interest of Government for EPA to work with the States under RCRA under one policy and Army to operate under a 404 permit program for garbage disposal on a different basis. It is logical to identify regulations of garbage disposal with EPA's current and historic mission. It strains reason to have the Army Corps of Engineers, with its primary military and navigation missions, to lead this garbage disposal regulation."

They commenters believed that letter indicates that while EPA has many solid waste responsibilities under its RCRA programs and has developed expertise in that area, the Corps has very limited expertise.

The letter in question addresses the "proper way to regulate garbage disposal." As explained elsewhere in today's preamble, we have modified the proposal in today's rule to generally exclude trash or garbage from the definition of "fill material." We thus believe today's rule to be consistent with the referenced letter. We also note that since 1984, through its dredged material management program, the Corps has gained considerable expertise with regard to disposal of geological materials and sediments dredged from waters of the U.S. See for example, Inland Testing Manual. EPA/USACE, 1998. Evaluation of Dredged Material Proposed for Discharge into Waters of the U.S. — Testing Manual. EPA-823-B-98-004, Washington, DC. Moreover, as explained in the preamble to the proposed rule (65 FR 21296), where discharges of solid waste subject to Section 404 also result in the discharge of effluent to waters of the U.S., the effluent discharge would require a Section 402 permit and thus be subject to applicable technology and water quality based standards under that program.

D. CWA regulation of activities related to mining practices

Some commenters generally agreed with the language relating to mining activities and by-products provided in the definition of "discharge of fill materials." One commenter indicated that the addition of examples served to "clarify Section 404's applicability to solid waste landfills and placement of coal mine overburden." Many of these commenters wrote in to explain the practical realities associated with certain types of mining activities. They agreed that utilizing Section 404 authority is the only reasonable approach under which mining activities can be per-

mitted. A result other than that proposed by the rule, commenters said, "could deal a crippling blow" to the mining industry. One commenter did, however, voice concerns over the current Corps practice of permitting "valley fills" under the authority of Section 404 and thus disagreed with the inclusion of mining activities at all in the definition of "discharge of fill material."

Commenters had concerns though with the identification of only one particular mining activity (coal mining) and one particular by-product of mining activities (overburden). They suggested that the "singling out" of coal mining overburden may leave the impression that other mining activities and their related by-products are not intended to fall within this definition, leaving to question if mining activities, other than the coal industry, fall into Section 404 regulation. Some commenters further suggested that the rule draws an 'arbitrary distinction" among types of mining by the specific inclusion of coal mining overburden as an example of fill in the language of the rule. These commenters stated that the specific inclusion of coal mining related materials may result in differing treatment under the regulations of other forms of mining overburden. This, commenters suggest, will create significant uncertainty in other sectors of the mining community.

Under the CWA, the regulatory programs of the Corps and the EPA are concerned with "discharges' into waters of the United States and their related effects. In general, Section 404 discharges into waters of the United States that are associated with mining activities primarily fall into two broad categories: the discharge of overburden materials, and the discharge of mining by-products

such as those resulting from mining beneficiation or the processing of mined materials. Overburden materials typically consist of the same kinds of rock and soil materials that are typically utilized for construction fills which, when discharged into waters of the United States, have traditionally been regulated by the Corps under section 404 of the CWA. In contrast, the mining by-products may have a slightly different physical form from the traditional rock and soil used as fill material, but it can have the same effect on the aquatic environment as those materials. Where the discharge of both types of materials into waters of the United States will result either in a change in the bottom elevation, or in the replacement of the waters with dry land, both materials clearly qualify as "fill material" under this rule, and their discharge into waters of the United States will be regulated by the Corps under section 404 of the Act.

However, the scope of the Corps' review of such discharges normally will encompass the direct, indirect, and cumulative effects on waters of the United States. Under Section 404, the agencies may not evaluate or control mining activities that are otherwise not regulated under the CWA.. **The CWA does not regulate mining activities, per se. However, as indicated, some activities that are associated with mining do involve discharges of materials into waters of the United States.**

In the so-called 'valley fill' situations, coal mining interests under certain circumstances have no practicable alternative to placing the rock and soil overburden, slurry, tailings and similar materials from mining operations into valley areas that most typically contain streams and wetlands. Mining activities, other

than coal mining, are sometimes faced with similar situations. Both the Corps and the EPA agree that the placement of these materials in areas that qualify as waters of the United States must be regulated, but not absolutely prohibited, under section 404 of the CWA. While some Corps Districts have been regulating mining discharges in the manner the agencies believe appropriate, today's rule will clarify the agencies' position for all regulators and members of the public and result in uniform application of these important requirements.

Accordingly, we disagree with those comments that urge us to maintain the confusion created by the Corps and EPA having different definitions for the term 'fill material' with the purpose being to curtail all mountaintop mining and other similar mining practices. We believe that the appropriate application of these key jurisdictional terms and of the Section 404 permit requirements, in the context of specific requests for authorization, can result in the authorization of activities that are consistent with the CWA requirements. It is not within the purview of the Corps' and EPA's authority to address alleged problems associated with mining practices that go beyond those associated with discharges into waters of the U.S.

E. Environmental Effects of Proposal

Many commenters opposed to the rule expressed concern that it would have broad and far-reaching environmental effects, characterizing it as allowing the use of waters of the U.S. as dumping grounds for excess mine overburden and other solid wastes, and

asserting that the rule would result in a dramatic increase in such dumping These commenters contended that mountaintop removal coal mining and the use and size of valley fills associated with this practice, in particular, would increase, referencing the fourfold increase in affected areas in West Virginia over the past twenty years as an example. Many commenters asserted that the proposed rule would result in a backsliding from improvements in water quality gained through the CWA and SMCRA.

We believe that the preamble to the rule addresses these concerns at length. In sum, we disagree that today's rule would have any significant effect on the environment, including encouraging mountaintop mining activities. Today's rule is consistent with EPA's longstanding definition of fill and the current practice of regulating valley fills under section 404. Today's final rule simply brings improved consistency and clarity into the regulations. This improvement will lead to more effective implementation of the CWA, thereby strengthening environmental protection. The rule should not be misread as opening U.S. waters to uncontrolled waste; analysis under the guidelines and appropriate mitigation provide the most appropriate framework for assessing and responding to proposed impacts.

A number of comments also detailed past, present, and possible future ecological effects of mountaintop mining coal removal, and other mining practices which involve fill material. For example, the comments stated that more than 300,000 acres of hardwood forests in West Virginia have been destroyed by the practice of mountain top mining. Many noted that the forests of Appalachia are among the most productive and diverse in North America,

that they are vitally important to migratory birds, and that many species are unique to Appalachia. Many commenters referred to affected areas as being among the richest temperate freshwater ecosystems in the world. Others discussed the various effects to underlying streams and surrounding areas, including impacts on air quality, stream hydrology, temperature, runoff, aquifer recharge, and the aquatic and terrestrial life (including impacts on threatened and endangered species) that depend on the affected streams and neighboring habitats. Others discussed the pollution in immediate and downstream areas, such as acid and toxic mine drainage, as well as possible effects of other polluting waste, noting that contamination has rendered many streams lifeless. Some commenters noted that negative effects would extend downstream all the way to coastal wetlands and estuaries.

Comments also provided information on current conditions of natural resources as evidence of the already degraded environment, noting that 750 miles of streams have been filled in West Virginia, and that 12,000 miles of streams in the U.S. have been contaminated from mine overburden, many of which have not yet been reclaimed. Two commenters noted that the Coal River in West Virginia has been named as one of the country's most endangered rivers for the past two years due to mountaintop removal coal mining, and expressed concern about the cumulative impacts of future valley fills creating new waste streams into already degraded rivers. Another commenter found discrepancy between the legal practice of mountaintop removal coal mining and the illegal use of dynamite for fishing of coral reef fish in marine environments. Many expressed concern about the extent and permanence of effects on the envi-

ronment, such as changes in landscape, contour, and habitat, effects on downstream water quality when headwaters, streams and wetlands are removed from the watershed or carry contaminated waste, and the future cumulative impacts to rivers and watersheds in impacted areas. Furthermore, they argued that mining companies have not taken responsibility to restore and rehabilitate land and waters affected in the past, and that EPA and the Corps have failed to require such measures.

We maintain that by improving consistency and clarity, today's rule increases regulatory effectiveness. Furthermore, many of the wide range of impacts detailed in the comments are not within the jurisdiction of the Corps and EPA. The Office of Surface Mining (OSM) has authority to address concerns such as stream hydrology, water quality, acid and toxic mine drainage, landscape contour, the restoration and rehabilitation of affected areas, and the use of explosives in relation to mining under the SMCRA §515(b). OSM sets specific environmental protection performance standards under SMCRA, which addresses the environmental concerns voiced in comments. While improvements in the regulation of mining practices is worthy of attention, this rule is not the vehicle for addressing the range of issues identified in the comments.

Numerous commenters maintain that this rule will have direct effects on human health, and were particularly concerned about the contamination of drinking water. Several comments stated that drinking water sources in some coalfield communities are no longer reliable, forcing communities to either pay for systematic purification or to purchase purified drinking water. One commenter indicated that many

families cannot afford to pay for clean drinking water. Part of EPA's mission is to ensure safe drinking water, and under the Safe Drinking Water Act, EPA has the authority to set drinking water standards to control the level of contaminants in the nation's drinking water and to regulate publicly-or-privately-owned drinking water systems which serve 25 people or more. EPA does not regulate private wells that supply water to fewer than 25 people, or private drinking water supplies from streams or cisterns, but works closely with our State, Tribal, and local partners to prevent contamination of drinking water supplies at the source.

Many commenters from the affected communities discussed other impacts from mountaintop removal coal mining, such as increased flooding, damage to the structural integrity of homes and other buildings, dust, noise, and vibration from blasting. Some contended that families have been uprooted due to unfavorable living conditions, sometimes leaving homes or communities that have existed for many generations, resulting in the loss of cultural heritage in Appalachia. In addition, many commenters mentioned the adverse impacts on aesthetics, historic sites, water recreation and tourism. We appreciate these concerns, and again stress that OSM has authority over many of these impacts, and in particular that explosives are used only in accordance with State and Federal laws and regulations (SMCRA §515(b)(15)). Moreover, OSM must ensure blasts do not damage property outside the permit area.

Other comments viewed the proposed rule as a weakening of federal protection. One commenter argued that the proposed rule would make it impossible to comply with wetland rehabilitation and

recovery mandates, TMDLs, and the Clean Water Action Plan. Another comment argued that the proposed rule contradicts the *Report to Congress: Waste from the Combustion of Fossil Fuels*, in which EPA held that coal combustion waste in mined lands were strongly acidic. Today's rule represents a coordination of efforts aimed at minimizing confusion and inefficiency in the evaluation and development of mitigation for proposed projects, and thus works towards the goals of the Clean Water Action Plan. Anti-degradation policies provide for the protection of existing uses in waters and the level of water quality necessary to protect those uses. EPA interprets 40 CFR 131.12(a)(1) of the anti-degradation policy to be satisfied with regard to fills in wetlands if the discharge does not result in "significant degradation" to the aquatic ecosystem as defined in the Section 404(b)(1) Guidelines. Furthermore, it is still the case that coal combustion wastes are regulated under RCRA Subtitle D (Federal Register 40 CFR Part 261). We believe that today's rule is consistent with current federal laws and regulations.

We maintain that by improving consistency and clarity, today's rule increases regulatory certainty but will not have any significant effect on the environment, and will not cause the other effects of concern related to mountaintop mining operations. While specific proposals to undertake mountaintop mining and discharge fill material into waters of the U.S. will have environmental and other effects, today's rule does not authorize or otherwise address those effects, which are, however, addressed in the context of the section 404 and SMCRA permitting processes. Therefore, nothing in this rule is inconsistent with environmental protection principles under various aspects of the CWA or with EPA's regulatory

determination relating to fossil fuel combustion wastes under RCRA, which was solely concerned with whether regulation of those wastes under subtitle C of RCRA was warranted. Furthermore, many of the wide range of impacts detailed in the comments are not within the jurisdiction of the Corps and EPA. The OSM has authority to address concerns such as stream hydrology, water quality, acid and toxic mine drainage, landscape contour, the restoration and rehabilitation of affected areas, and the use of explosives in relation to mining under SMCRA §515(b). OSM sets specific environmental protection performance standards under SMCRA, which reflects the environmental concerns voiced in comments.

F. Unsuitable Fill Material

Many commenters raised concerns over the proposal's discussion of including an "unsuitable fill material" provision in the Corps' regulations that would seemingly have replaced the waste exclusion currently defined by the Corps' regulations. They indicated that the proposed definition of unsuitable fill was "too weak and vague" to adequately replace the waste exclusion as currently embodied in the Corps regulations. Commenters cited to the preamble language indicating that "unsuitable" materials could include those that have the potential to leach contaminants. They identified this as overly broad and indicated that it provided little guidance as to what materials may be considered "unsuitable" and therefore not permitable. Commenters suggested that this would add new uncertainty into the regulatory process and was contrary to EPA's and the Corps' stated intent not to alter current permitting practices. Similarly, one commenter noted that the April 2000

preamble discussion of homogeneity and heterogeneity as a determining factor for the suitability of fill material was confusing, particularly because both terms are used to describe materials that would not permitted under section 404. Specifically, the commenter was seeking clarification as to whether the proposed rule intended to exclude from section 404 only those entrained solids contained in water discharged pursuant to section 402, rather than any waste materials that may contribute contaminants to water.

In contrast, some commenters indicated that the definition, while useful in addition to the waste exclusion, was not broad enough to capture some discharges that they deemed also unsuitable as fill material. These commenters also generally argued that the appropriate place for this provision would be in the rule itself, as opposed to the preamble where it appeared in the April 2000 proposal.

Some commenters suggested that the agencies' comparison of unsuitable fill in the April proposal to the existing general condition addressing unsuitable fill which is applicable to all nationwide permits was inappropriate. These commenters stated that the general condition should not be use as a basis of support for widespread use elsewhere under section 404 as it is not justified due to the significant differences between individual permits and nationwide permits. Commenters further suggested that the concept of unsuitable fill is already adequately addressed by the Section 404(b)(1) Guidelines and related evaluation, thus the process for review of individual permits should remain as it stands now.

As it pertains to granting the Corps District Engineer discretionary authority to refuse to process a

section 404 permit application, commenters raised concerns that this would exceed the Agency's authority under the CWA. This, one commenter stated, undermines the "statutory scheme which contemplates reasoned decision making after notice and opportunity for a public hearing." One commenter indicated that this would "inject uncertainty into the process' and could lead to inconsistencies amongst the Corps Districts throughout the country. Commenters also indicated that the nature of the material should not be the only factor considered when making a determination to review a permit application or render a decision under section 404, as is suggested by the preamble discussion. Questions were also raised as to an applicant's right to appeal, either administratively or judicially, under the proposed scheme. Commenters indicated that the probability of numerous judicial appeals of decisions under this provision would seriously undercut the Agencies' purported reasoning for the suggested revision, conservation of limited Corps resources.

The agencies have not included an unsuitable fill category in the final rule but, as discussed in the preamble, the final rule does narrow the scope of "fill material" by excluding trash or garbage. **Since neither the Corps nor the EPA intended the proposed rule to imply that materials such as trash or garbage were suitable materials for placement in waters of the United States as fill, the preamble to the April 20, 2000 proposed rule alluded to a prospective administrative protocol under which Corps District Engineers could refuse to process a permit application if it was determined that the material proposed for discharge into waters of the U.S. was unsuitable as fill. After a review of the comments**

received on this proposal, the Corps concluded that, without specific criteria for determining what constituted such 'unsuitable' materials, these determinations by District Engineers could be inconsistent and thereby confusing to the regulated public. Therefore, the Corps and the EPA have abandoned further consideration of including an unsuitable fill category in the final rule.

However, the agencies have added an exclusion for trash or garbage to the definition of "fill material. " There are several reasons, for this exclusion. First, the preamble to the proposed rule and many of the comments recognized that certain forms of traditional solid waste material such as garbage, trash, debris, junk cars, used tires, discarded kitchen appliances, and similar materials are not appropriately used, as a general matter, for fill material in waters of the U.S. We agree that the discharge of such materials often results in adverse environmental impacts to waters of the U.S. by creating physical obstructions that alter the natural hydrology of waters and may cause physical hazards and other environmental effects. We also agree that these impacts are generally avoidable because there are alternative clean and safe forms of fill material that can be used to accomplish project objectives and because there are widely available landfills and other approved facilities to receive these kinds of materials for disposal Yet, the agencies also recognize that there are very specific circumstances where the placement of such materials in waters of the U.S. is associated with an appropriate project and

would be consistent with their regulation as "fill material" under CWA section 404. As such, the fmal rule does not include an unsuitable fill category but does include an exclusion for trash or garbage.

G. NEPA Comments

EA/EIS compliance. Commenters disagree with the Corps' assessment that no Environmental Impact Statement (EIS) was needed to evaluate the potential impacts of this rule to the human and aquatic environment One commenter indicated that the conclusion reached to not prepare an EIS was arbitrary and capricious. Commenters argue that the rule will have significant environmental consequences and this information must be made available to the public through the NEPA process. They added that this information should have been provided prior to issuance of the proposed rule.

Moreover, commenters disagree that environmental documentation during the permitting phase is sufficient. Commenters noted that this approach is flawed, as many mining discharges are permitted under the nationwide permit program which does not require individual environmental review. The potential impacts, one commenter suggested, are "staggering" given that, according to statistics, the Corps grants most permit requests.

While supporters of an EIS suggest that finalizing this rule will result in significant new discharges that previously would not have occurred, the Agencies maintain that this is not the case. The rule seeks only to clarify the appropriate regulatory framework and thus we do not expect there to be any significant change in the nature and scope of discharges that will occur. **As was indicated in the April 20, 2000,**

Federal Register notice of the proposed rule, the Corps has prepared an environmental assessment of the final rule. This assessment concludes that the adoption of the final rule reconciles the Corps and EPA definitions of the term "fill material" by adopting an effects-based definition, and by excluding materials such as trash and garbage, in most circumstances. The Corps' environmental assessment indicates that the adoption of this rule will minimize the confusion that was previously caused by the differing Corps and EPA definitions of "fill material." The environmental assessment concludes that the adoption of this rule simply clarifies agency roles and responsibilities under the CWA. As such, it facilitates the proper regulation of prospective discharges into waters of the United States, as intended by the Act. The Corps' environmental assessment ultimately concludes that, since the adoption of this rule will not significantly effect the quality of the human environment, the preparation and coordination of an EIS is not required. The EA, included in the administrative record for this rule, explains further the rationale for the Corps' conclusion.

Nonetheless, we appreciate the commenters concerns as they pertain to the implementation of nationwide permit 21. The Corps will be proposing regional conditions to nationwide 21 in the Appalachian states to help reduce the environmental impacts resulting from authorized discharges under this permit.

Ongoing Programmatic EIS. In general, commenters stated concerns that the proposal to clarify

the definition of "fill material' is being improperly initiated prior to the completion of an EIS assessing the environmental effects of mountaintop mining operations to waters of the United States and to fish and wildlife resources, within which, the proposed rule may be identified in the analysis as one alternative. One comment characterized the action as "ill-timed" and "aimed at providing an answer before the Draft EIS is issued." Another comment indicated that moving forward with the rule prior to the issuance of a Record of Decision on the EIS is not permissible under the CEQ regulations. Commenters also expressed concern over the impact the proposed rule may have on the adequacy and completion of the EIS, as well as its potential for adverse environmental impacts.

We do not agree that this proposal is being initiated improperly prior to the completion of this EIS. The defined action of the EIS is to

> ...consider developing agency policies, guidance, and coordinated agency decision-making processes to minimize, to the maximum extent practicable, the adverse environmental effects to waters of the United States and to fish and wildlife resources from mountaintop mining operations, and to environmental resources that could be affected by the size and location of fill material in valley fill sites.

The EIS presumes that the materials deposited as a result of practices associated with mountaintop mining will continue to be regulated as fill material by the Corps. It is believed that the actions undertaken as part of the EIS process, aimed, in part, at

analyzing the permitting process, will complement the implementation of the proposed rule by providing additional recommendations on improved coordination on permitting decisions as well as further evaluation of agency policies and practices with a view towards implementing additional regulatory improvements.

Furthermore, finalization of this rule should not await the completion of the Draft EIS. The Draft EIS is currently scheduled to be released in the Fall of 2002, followed by a 45 day comment period. Delays in the completion of the EIS have resulted from the time needed to secure adequate funding to initiate field studies, the desire to study the environmental effects of mountaintop mining operations over a series of seasons, and difficulties arising from the economic analysis being conducted by West Virginia University. Confusion amongst the regulated community currently exists in the day to day operations of the program in the field. This rule seeks to address that confusion by providing a uniform definition and should not be delayed by an EIS that already assumes this to be standard practice.

H. Federalism

Two commenters expressed concern that, contrary to the preamble, the proposed rule did have profound federalism implications, and that omitting a discussion of these implications was a violation of Executive Order 13132, which requires meaningful input from state and local officials when a proposed rule has substantial direct effects on the distribution of power and responsibilities among various levels of government. They argued that by attempting to assert section 404 jurisdiction over State-permitted RCRA landfills, the proposal would result in the

Corps potentially contradicting and "vetoing" land use and landfill siting decisions specifically left or delegated to the States and local government authorities. One of these commenters also expressed the view that, by requiring a federal "public interest" decision on the use of land in addition to a state decision, the Corps would be injecting itself into the area of land use, which is an area of regulation traditionally and intentionally left by Congress and the U.S. Constitution to state and local authorities.

One of the commenters also viewed the Ninth Circuit's decision in *RII* as ruling that Corps jurisdiction over solid waste landfill was prohibited because of federalism implications, pointing to *RII* as holding that jurisdiction was "unreasonable" because it was "duplicative," because it could lead to inconsistent decisions between State and federal agencies applying the same standards, and because the Corps' own regulations provided that state and federal wetland programs "should complement rather than duplicate one another." 151 F.3d at 1169. The commenters stated that changing the definition of "fill material" to include landfill structures would reintroduce the very duplication and inconsistent state and federal regulation that the Ninth Circuit held impermissible under RCRA and the CWA. At a minimum, the commenter argued, these federalism implications must be acknowledged, and state and local input sought, as the Executive Order requires.

In response, we refer you to section III. C.2 for a discussion of the *RII* case. Moreover, we note that Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires us to develop an accountable process to ensure "meaningful and timely input by State and local officials in the devel-

opment of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." We continue to believe for the reasons explained in the preamble to the final rule that today's rule does not have such substantial direct effects, and thus does not have Federalism implications.

One of the commenters raising federalism concerns further indicated these concerns were especially significant as "the Corps has asserted 404 jurisdiction over virtually every water body, drainage and erosional feature," including isolated waters used by migratory birds. This commenter believed that the current proposal would regulate all solid waste landfills that affect any waters of the U.S., constituting a "nearly total duplication" of state RCRA Subtitle D programs.

In response we note that the test for jurisdiction under section 404 is whether there is a discharge of dredged or fill material into waters of the U.S., not whether the landfill "affects" waters of the U.S. Second, since this comment was made, the US Supreme Court ruled on January 9, 2001, that CWA section 404 jurisdiction does not in fact extend to non-navigable intrastate waters based solely on their use by migratory birds. *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001). The agencies issued a joint legal memorandum on January 19, 2001, to that effect which is available on EPA's Website at

http://www.epa.gov/owow/wetlands/swanccnav.html. Today's rule does not address the scope of geographic jurisdiction under the CWA.

I. Economic Effects of Proposal

A number of commenters expressed concern about the economic effects of the proposal on the surrounding communities or State or local economies, including concerns that economic impacts associated with the proposal were not evaluated in depth. Some of these comments expressed concern that economic impacts on timbering and farming were not addressed, while others noted the potential for impacts to commercial and subsistence fisheries, even in coastal areas. Others expressed concern that the proposal would result in people baying to buy drinking water because their well water has either dried up or has been contaminated by mountaintop removal mining. Still others expressed concern that allowing mining companies to place waste in streams would cause serious harm to future economic growth plans in Appalachia. These comments indicated tourism and recreation are important to future economic growth in Appalachia and are also dependent on a heathy environment and clean water.

A number of commenters expressed concerns that local communities would suffer the economic costs from a destroyed environment and would require federal taxpayers to pay billions in cleanup costs. These comments stated that although there is a federal trust fund to pay for cleaning up old coal sites, there is no money for cleaning up new damage that coal and hardrock mines would cause under the proposed rule. They asserted the Department of the Interior estimates cleaning AML sites in America will cost over $8 billion, with over half for clearing

out clogged streams and cleaning up water to make it drinkable.

We do not believe today's rule will result in significant economic effects. Neither the proposal or today's rule has the effect of authorizing the placement of waste material in waters of the U.S. Rather, it clarifies which regulatory regime, section 402 or section 404, is applicable. In addition, it does so in a way that is consistent with the current approach of using section 404 to regulate discharges of coal mining overburden.

Other comments asserted that allowing placement of mine waste in waters of the U.S. supports coal production cost savings that are economically short-sighted, resulting in primarily short-term job growth, while sacrificing natural surroundings and future water quality. (Some noted that mining jobs have actually declined despite increases in coal production.) Others argued that, by making it easier and less expensive to mine coal, the proposed rule would be harmful by encouraging inefficient infrastructure development and unsustainable levels of consumption, thus ensuring quicker depletion of coal resources, while ultimately impeding a transition away from fossil fuels. Several comments viewed the proposal as a subsidy and one recommended the alternative of allowing market forces to set the price of coal within the current regulations.

These comments address issues related to national energy policy and the role of coal in energy production. Today's rule addresses matters related to the applicability of section 404, and issues related to the appropriate role of coal or other fossil fuels in national energy policy are outside the scope of today's rulemaking.

J. Suggested Alternatives or clarifications

1. Issue Guidance or revise MOA instead of modifying the rule

Some of the comments criticized the agencies for not considering less drastic alternatives to the proposed rulemaking. One comment, in particular, suggested that the agencies could have satisfied the goal of eliminating the potential abuse of the primary purpose test without the dramatic adverse effects associated with eliminating the test itself and the waste exclusion. Some alternative approaches included issuing guidance indicating that the Corps, rather than the applicant, would establish the primary purpose test of a proposed project Another suggested alternative was issuing guidance clarifying how placement of heterogeneous solid waste and landfill liners should be regulated under sections 402 or 404, and RCRA. The commenter suggested that such guidance ban the placement of those materials in wetlands, as has been done in Kentucky. Another comment asserted that the proposal was inconsistent with the existing 1986 MOA and suggested that the agencies clarify the MOA as an alternative means of eliminating regulatory confusion.

The agencies do not agree that their goals for this rulemaking could be accomplished through the issuance of guidance. First, the issuance of guidance would not alter the fact that the two agencies responsible for administering the section 404 program have different definitions for the same key jurisdictional term. Conforming the agencies' regulations can only be corrected through a rulemaking. Second, the programmatic issues created by the courts' analyses in the *RII* and *Bragg* cases stem from the regulatory language in the Corps' regulations, which

is not amenable to being resolved by guidance. Finally, the agencies do not agree that the proposed rule contradicts the existing MOA.

2. Eliminate primary purpose but retain waste exclusion

Another suggested example of a more limited approach to revising the definition of "fill material" was eliminating the primary purpose test but retaining the waste exclusion. One group noted that this approach still would allow the Corps to regulate the use of wood chips and landfill liners under Section 404, while preventing the dumping of waste. Elimination of the primary purpose test without retention of the waste exclusion, argued commenters, would impermissibly extend the scope of the Corps' authority to permit waste disposal, even with the revised definition of "unsuitable fill material," to which one commenter referred as vague, narrow and porous.

Another commenter, representing several environmental groups, asserted that applying a purpose-based waste exclusion would not create additional burdens for the Corps, because analysis of "overall project purpose" and "basic project purpose" is already required under the section 404(b)(1) Guidelines. In fact, the comment noted that the identification of project purpose was an essential part of the practicable alternatives analysis - the heart of the 404(b)(1) Guidelines. The comment noted that the Corps' experience, plus an ample body of judicial decisions providing guidance on project purpose should be sufficient for the Corps to determine when the purpose of an activity is waste disposal. This comment suggested that the Preamble discussion of the difficulty associated with applying the waste ex-

clusion called into question the Corps' ability to implement the Section 404 requirements, in general.

This comment recommends that the Corps amend the regulation to make clear that the determination of whether the project's purpose is waste disposal would be made by the Corps and EPA, and not the project applicant and further that the determination would be based on an independent evaluation of the project.

The agencies do not agree that amending our proposal to retain the waste exclusion but eliminate the primary purpose test is a better approach to defining "fill material." First, we believe that a definition that primarily focuses on the effect of the material on the aquatic resource as opposed to its purpose better fulfills the purposes of the CWA. Retaining a purpose test focused on waste is confusing and would interfere with the overall benefit of the effects based approach. Second, any similarity between the analysis that is required to implement the waste exclusion and the 404(b)(1) Guidelines does not address the fact that the program has experienced some confusion over how and when to apply the waste exclusion in the Corps' definition. Although only 2 cases were identified in the preamble, this issue has come up on numerous occasions in the context of the permit program. When it arises in the context of general permits, project-specific application of the 404(b)(1) Guidelines is not undertaken, contrary to the suggestion of the comment. We do not agree that the difficulties that have arisen suggest that the Corps is not able to properly implement the program.

3. Clarify or delete effluent limitations guidelines

One commenter questioned the need for the proposed exclusion of materials covered by effluent limitation guidelines or NPDES permits, asserting that EPA has never had significant difficulties with the fact that its long-standing definition of fill material does not include such an exception. Several other commenters sought clarification of the discussion regarding the exclusion. Those commenters voiced concern that the discussion in the Preamble could be construed to exclude any and all materials from which subsequent runoff would be subject to effluent limitation guidelines, such as leach pads and tailings piles. Another commenter argued that the effluent limitation guidelines cited in the Preamble did not support the assertion that EPA generally regulates solid waste materials of a homogeneous nature, because the referenced effluent limitation guidelines apply to process wastewater or mine drainage, not solid materials. As such, the commenter found the reference confusing. A different commenter suggested that the exclusion based on effluent limitations include a specific effective date for such standards to be in place, to avoid a due process violation by excluding materials that are not currently covered or expected to be so within a reasonable time. An explanation has been provided earlier in this Preamble regarding materials not covered under section 404 permitting requirements. The determining factors do not include a distinction of either homogeneity or heterogeneity of the materials.

Although the (e)(2) language of the exclusion in the final rule has been clarified and ambiguous language referring to effluent limitation guidelines

eliminated, EPA agrees that, where runoff constitutes stormwater, it would be covered under the section 402 program. One commentor recommended that **the proposed (e)(2) exclusion language include not only discharges expressly authorized by an NPDES permit or covered by an effluent limitation guideline or standard, but also discharges associated with activities covered by a pollution prevention program implemented in connection with a facility's NPDES permit or as part of a facility's overall program for compliance with effluent limitations guidelines and standards. As discussed, we have modified the exclusionary language in the final rule to remove any ambiguity regarding its scope**.

4. Explain effect on treatment of RCRA landfills

Comments generally centered around the idea that the implementation of the proposed rule would add a layer of regulation to those activities already regulated under the Resource Conservation and Recovery Act (RCRA). One comment focused on the proposed rule's failure to provide, in explicit language, exceptions for those activities regulated under RCRA, as compared to that which was provided for Section 402 activities, while another recommended that the exclusion also apply to infrastructure associated with solid waste landfills. That same commenter asserted that the government incorrectly concluded that the rule does not have any economic impact which would require the Agency to develop a written economic statement. They maintained that part of the economic impact would be shouldered by the Corps as the implementation of the proposed rule would require the Corps to assess environmental im-

pacts in an area not previously regulated by the Corps. These comments are fully addressed in the preamble to the final rule and in the discussion of the *RII* case.

5. Modify reference to coal mining overburden in the definition of "discharge of fill material"

A number of comments raised issues with respect to the proposal to include coal mining overburden in the definition of "discharge of fill material." Although one comment suggested that coal mining overburden and all other mining waste materials should be excluded from the definition of fill material, most of the comments argued that only referring to coal mining overburden was too narrow and misleading. They noted that this rule is intended to apply to coal mining as well as hard rock mining activities. These comments urged that the rationale behind the proposed rule as well as explicit statements in the April 2000 preamble that the agencies were not intending to change existing practice argued for broader language that more appropriately reflected the agencies' intentions. Suggested alternatives include "placement of coal mining overburden and coal refuse," "mining overburden and waste rock," "coal mining or other mining overburden," and "berms, or dams, associated with the sedimentation ponds." The thrust of these comments is that absent the inclusion of broader language in the rule, the implementation may continue to result in confusion and uncertainty for the regulated community. We have modified both the definition of "fill material" and "discharge of fill material" to make clear that this rule is not limited to coal mining. The definition of "fill material" includes "overburden from mining or other excavation

activities;" the "discharge of fill material" includes "placement of overburden, slurry, or tailings or similar mining-related materials."

6. Expand the unsuitable fill category to supplement the waste exclusion

Several commenters suggested that the 'unsuitable fill' protocol described in the preamble to the proposed rule be expanded for use in other situations involving discharges into waters of the United States, such as waste disposal operations.

As described, in the earlier section on unsuitable fill, the Corps and the EPA have abandoned further consideration the "unsuitable fill" protocol that was described in the preamble to the April 20, 2000 proposed rule. Instead, the final rule provides clearer more predictable guidance with respect to the types of materials that qualify as "fill material," and this has obviated the need for the "unsuitable fill" protocol. As such, there is no opportunity, and no need, to expand this category of prospective discharge materials.

7. Miscellaneous Suggestions and comments

a. Combine piling regulation in same section as new fill definition

Commenters requested that the definition of fill material and discharge of fill material clearly require the regulation of pilings and piling supported structures. One comment specifically referred to the regulation of "mothballed" ships used for entertainment. These comments expressed concern over the Corps' inconsistencies as they relate to the regulation of these discharges and objected to the removal

of the reference to piling regulations. One commenter suggested the reorganization of the Corps regulations for easy reference to both the regulations pertaining to the definition of fill and pilings regulations.

The Agencies disagree that a specific reference to pilings and piling supported structures is necessary in the definition of fill material. The Corps' regulations indicate that "placement of pilings in waters of the United States constitutes a discharge of fill material and requires a Section 404 permit when such placement has or would have the effect of a discharge of fill material" (33 CFR 323.3(c)). However, this rulemaking is not a suitable forum for discussion regarding implementation of this regulation. The Corps does regard, as a matter of convenience and of logical consistency, the idea of combining these regulations as having significant merit. However, the final decision on implementing this suggestion will have to be deferred until such time as the Corps of Engineers publishes a consolidated version of its regulations. The Corps reserves the right to make all final decisions on the organization of regulations that it promulgates.

b. Create additional exemptions to compensate for the expansion in Corps jurisdiction

A few commenters suggested that one or more additional exemptions from regulation under section 404 of the CWA should be created in order to compensate for the expansion of jurisdiction that these commenters per-

ceived would result from the adoption of the proposed rule.

We do not believe that either the rule proposed on April 20, 2000, or today's final rule constitutes an expansion of jurisdiction under the CWA. These rules simply sort the universe of prospective discharges into those that are regulated as "fill material," and those that are regulated as "all other pollutants" under the Act. Even if the adoption of a prospective rule arguably did represent some expansion of jurisdiction, we do not agree that additional exemptions should be created to compensate for that expansion. We believe that the criteria applied to any administrative interpretation of CWA requirements, jurisdiction, and exemptions must relate exclusively to the intent of the law. As such, we believe that any consideration of the equity between the scope of CWA jurisdiction and those activities that are exempted is the exclusive province of the legislature.

c. Effect on existing permits

Several commenters questioned the effect of this proposed rule on previously issued Corps of Engineers permits, and they expressed the concern that new criteria associated with the adoption of a revised definition of "fill material" would be imposed retroactively to previously authorized activities, in effect invalidating previously issued permits.

Today's rule only addresses the definition of fill material and the adoption of this rule will have no effect on existing permits.

d. Effect of rule on treatment of stormwater

One commenter suggested that, in addition to subsection (e)(2) of the proposed rule (i.e., discharges covered by effluent limits and discharges covered by a section 402 NPDES permits do not require a section 404 permit), the definition should also explicitly exclude stormwater discharges that employ "approved best management practices in effect at the time of construction of the stormwater outfall," whether or not such discharges are covered under section 402 regulations. As discussed in earlier comment responses, two regulatory programs were established by the CWA serving distinct objectives and goals. Provided that construction activity mobilizes pollutants that impact the receiving water, this is activity that is subject to regulation under the section 402 NPDES program. This is clearly distinguishable from discharges of fill material that impacts a discernable disposal site by raising its bottom elevation or replacing waters of the U.S. with dry land subject to regulation under the section 404 program. However, any ambiguity caused by the language in the proposed rule regarding discharges subject to effluent guidelines or section 402 requirements has been removed by the deletion of this portion of the proposed rule's language.

e. Clarify when conversions, diversions, and waste treatment systems can be used to avoid jurisdiction

Several comments raised issues about practices described as "conversion" and "diversion" of waters of the US. One commenter described the first practice as converting waters into non-waters by impounding them for waste treatment, while the second practice

involves diverting a stream out of its channel, such that the newly created dry area is no longer jurisdictional and not subject to CWA regulation. One industry comment explained that the practice of diverting ephemeral and intermittent streams has been used by his company. Facilities and materials of various types are then placed in the former streambeds without being subject to CWA regulation because they are no longer waters of the U.S.

Two comments from environmental organizations suggested that these practices violated the letter and spirit of the CWA and that it should be made clear that such methods could not be used to avoid CWA jurisdiction. One of these two comments explained that the practice of diversion essentially involves turning a live stream into a "sterile concrete or earthen channel devoid of most or all of the aquatic life that existed previously." As such, the comment asserts that the practice destroys the natural structure and function of the stream ecosystem, and thus violates the CWA mandate to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Moreover, this comment asserts that the practice of diversion violates both the designated uses and the antidegradation policy elements of the water quality standards. The commenter argued that removing waters from their stream banks is not consistent with maintaining the minimum standard that waters be fishable and swimmable, nor with the requirement that all existing designated uses must be maintained.

These comments are outside the scope of the rule since they address the scope of geographic jurisdic-

tion under the CWA and other requirements, whereas today's rule simply defines fill material.

f. Private appropriation of public waters

Two commenters expressed the view that the rule improperly allowed the private appropriation of public waters, for disposal of mining overburden and other waste, and construction of in-stream sediment ponds. They stated these waters are held in public trust and are designated for beneficial uses, one of which is not to be waste transport. They asserted that in-stream sediment ponds convert the stream segment upstream of the ponds into unauthorized "mixing zones" for treatment and dilution of mine-related pollutants and settling of sediment from contaminated stormwater runoff, in derogation of State and Federal water quality standards.

We do not believe today's rule improperly allows private appropriation of public waters. Section 404 of the CWA expressly authorizes issuance of permits to authorize placement of dredged or fill material and does not condition authority to issue such permits based upon whether the project proponent is a private entity. With regard to use of waters for waste transport and mixing zones, these involve issues related to implementation of State water quality standards under Section 303 of the CWA, and are outside the scope of this rule. We do note, however, that Section 404 permits are subject to certification by the State under Section 401 as to compliance with water quality standards, and if the State has such concerns it is free to deny 401 certification. Readers are also referred to the previous preamble discussion of anti-degradation issues for related issues.

g Consistency between definitions of discharge of dredged material and discharge of fill material

Several commenters indicated that there was a need for the rule to reconcile any inconsistencies between the definitions of "discharge of dredged material" and "discharge of fill material." One of these commenters requested additional examples be included in the list of examples of fill material at section 323.2(e)(1), to avoid any misunderstanding that other materials can also displace wetlands and waters. The commenter also expressed concern that the term "dry land" in section 323.2(e)(1)(i) might connote a limited intent of regulated activities as there are some activities that can physically displace wetlands and waters but may not necessarily result in dry land. They expressed support for an interpretation of the term "changing the bottom elevation of any portion of a water" in section 323.2(e)(1)(ii) that would include redeposits from mechanized land clearing.

We do not believe such a clarification in the rule is necessary since, as the commenter notes, the definition of fill material in today's rule embraces material that changes the bottom elevation of any portion of a water of the US. We do note that where redeposits associated with landclearing have the effect of fill, courts have found that a discharge of fill material has occurred. See, *Avoyelles*, supra; *Borden Ranch Partnership v. U.S. Army Corps of Engineers*, 261 F. 3d 810 (9th Cir. 2001).

Two commenters believed the proposal was inconsistent with the CWA, as construed in recent case law, including *National Mining Association v. U.S. Army Corps of Engineers*, 145 F.3d 1399 (D.C. Cir.

1998) (*NMA*); one of them also asserted that it was inconsistent with *United States v. Wilson,* 133 F.3d 251 (4th Cir. 1997). One reason given for inconsistency with *NMA* was that the court clarified that the reference in section 404 of the CWA to "*discharge* of dredged or fill materials" necessarily referred to the "addition" of material to the waters, and that "because incidental fallback represents a *net withdrawal*, not an addition of material, it cannot be a discharge." 145 F.3d 1404 (emphasis added). The commenter thus reasoned that excavation of a landfill cell, followed by the addition of a required two-foot thick liner results in a "net withdrawal" not an addition of material. The commenter also asserted that the Corps does not have CWA jurisdiction over "excavation" in wetlands, noting that excavation is governed only by section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403, which extends only to waters subject to the ebb and flow of the tide or used or potentially used in interstate transport. This commenter also pointed to the LRI landfill, noting that the landfill cells were excavated in areas that contained isolated wetlands, that no excavated materials were placed back in any wetland areas on the site, and thus, that the Corps had no jurisdiction over the activity. Moreover, the commenter asserted the liner and other landfill infrastructure subsequently placed in the excavated area did not constitute a "net addition" of material, and that, regardless, the discharge site was no longer a "wetland," as a result of activities not within the jurisdiction of the Corps. Finally, the commenter noted that the solid waste itself was not jurisdictional material, because it was excluded from the definition of the "fill material."

The *NMA* decision addressed what constitutes a discharge of *dredged material*, not fill material, and thus is not germane to today's rulemaking. In addition, that decision turned on the interpretation of "addition" under the CWA, an issue not addressed by this rulemaking. Issues related to what constitutes non-regulable incidental fallback under the *NMA* decision have been addressed in a separate rulemaking addressing the definition of "discharge of dredged material." 66 FR 4550. Similarly, assertions by the commenter related to Rivers and Harbors Act jurisdiction and whether excavation activities alter wetlands so as to defeat CWA jurisdiction are also outside the scope of this rulemaking. Interested readers are referred to the relevant regulations at 33 CFR Part 329 with regard to Rivers and Harbors Act jurisdiction and to 33 CFR 328.3(b) and 40 CFR 230.3(t) with regard to what constitutes a "wetland." With regard to *US v. Wilson*, that decision addressed the scope of geographic jurisdiction of the CWA, and thus also is not germane to today's rulemaking which deals with the matters related to the definition of "fill material." Readers are referred to the preamble's previous discussion of *Solid Waste Agency of Northern Cook County* for additional information on CWA geographic jurisdiction and isolated wetlands.

Another commenter requested that we revise the definition of "discharge of fill material" to provide, consistent with the approach in the definition of "discharge of dredged material," that incidental or *de minimis* addition of fill material does not require authorization under Section 404. The commenter reasoned that under the previous "purpose-based" definition of "fill material," such a *de minimis* exception was unnecessary because, as a practical matter, a discharge for the purpose of filling a water of the

US was not likely to be *de minimis*. The commenter noted that an effects-based definition would encompass even *de minimis* discharges, because they would have the effect of raising the bottom elevation, even if only slightly. Accordingly, the commenter recommended including the following sentence under the definition of "discharge of fill material:"

> "Section 404 authorization is not required for any incidental addition of fill material that does not have or would not have the effect of destroying or degrading an area of waters of the United States as defined in paragraphs (d)(4) and (d)(5) of this section."

The *de minimis* concept that has been applied by the agencies in the context of discharges of dredged material relates fundamentally to determining when an "addition" of a pollutant occurs in a water of the U.S. Because dredged material originates from waters of the U.S., the question of what is an addition is particularly relevant in that context. The agencies have never applied this concept in the context of fill material, those questions arc outside the scope of the narrow, definitional issues proposed in this rulemaking , and we decline to address them in this final rule.

APPENDIX D

Kensington Project
Lower Slate Lake Tailings Impoundment:
Habitat Creation and Mitigation Plan

Prepared for:
Coeur Alaska, Inc.
3031 Clinton Dr.
Suite 202
Juneau, AK 99801

Prepared by:
Kline Environmental Research, LLC
1731 50th St.
Somerset, WI 54025

and

Earthworks Technology, Inc.
409 West Neider St.
Suite A
Coeur d'Alene, ID 83815

July 14, 2003

* * * * *

... averaging five inches fork length for all capture methods pooled, were at the extreme lower end of the anadromous Dolly Varden length distribution from another Southeast Alaska lake (Heiser 1966). Their weight was 17% less than that of anadromous Dolly Varden of comparable length. Their annual growth rate (length and weight) averaged 59% less than the rate for anadromous Dolly Varden of comparable ini-

tial length. Based on these comparisons, Lower Slate Lake and streams in the Slate Creek drainage offer limited fish habitat. This limited habitat is reflected in a non-diverse, sparsely populated, assemblage of small fish.

Several multi-season wildlife surveys were conducted during the late 1980's and early 1990's in the Slate Lakes area (e.g. Dames and Moore 1990, King 1991, Cedar Creek Assoc. 1991). The area is within the general distribution area of the Berners Bay moose population. The herd is estimated at near 100 animals. Sign near the shores of Upper and Lower Slate Lakes indicated some use by moose during summer months that may be limited by a lack of shrubs and by the narrow, incised topography that limits development of preferred riparian vegetation.

Evidence also suggested that Canada geese may use the lakes for nesting and brood rearing (Dames and Moore 1990), although a different report generalized that this species usually nests within 100 yards of the marine shoreline in the region (Cedar Creek Assoc. 1991). During June 1990, 105 Vancouver Canada geese were observed on Lower Slate Lake. Observations made during November of 2002 included abundant goose sign around Spectacle Lakes, significant but less goose sign at Upper Slate Lake, and minor goose sign at Lower Slate Lake (Icy Strait Environmental 2002).

The following waterbird species were observed during surveys conducted in 1990 and 1991 in Slate Creek Cove (King 1991): loon, grebe, goldeneye, merganser, gull, mallard, teal, wigeon, harlequin, bufflehead, Canada goose, scoter, murrelet, scaup, sandpiper, and guillemot. This list provides an indication of the variety of species that reside in the

immediate area, many of which could conceivably use the Lower Slate Lake impoundment.

Other observations near Slate Lakes include beaver cuttings, red squirrel calls, a boreal toad at Upper Slate Lake, no sign of snowshoe hare, and no bats observed in flight (Dames and Moore 1990, Cedar Creek Assoc. 1991). A lack of prey, including Sitka black-tailed deer, is suspected to....

APPENDIX E

KLINE
ENVIRONMENTAL
RESEARCH, LLC

1731 50th Street
Somerset, WI 54025
Phone and Fax: (715) 247-4466
E-mail: kline@pressenter.com
www.pressenter.com/~kline

MEMORANDUM

To: Susan Hitchcock, COE

From: Ed Kline, Kline Environmental Research

CC: Rick Richins, RTR

Subject: Lower Slate Lake vs. Kensington tailings impoundment benthic productivity

Date: December 23, 2003

Rick Richins requested that I prepare this memo pertaining to benthic productivity of Lower Slate Lake relative to the proposed Lower Slate Lake tailings impoundment for the Kensington Project. Operational and storage capacity details were provided in a 11/03/03 memo from Eric Klepfer to Ron Rimelman. The memo below pertains only to benthic productivity and benthic acreage comparisons. This information has been provided to TetraTech and has been presented and discussed at meetings with EPA, USFS, and Alaska DNR.

As currently proposed, tailings would be under a water cover at depths ranging from 9 to 20 feet. The

perimeter of the impoundment would be submerged forest soil to a water depth of 9 feet where the fringe of the tailings deposit would begin. The tailings deposit would slope toward the center of the impoundment to a maximum water depth of 20 feet. Observations made in Lower Slate Lake revealed Dolly Varden redds that were restricted to <8 inches water depth during August 2003 (<1.5 feet during a high water event in October). Based on these observations, all tailings will be deeper than Dolly Varden spawning depths.

Areas of natural sediment and tailings were calculated relative to the depth of sunlight penetration and depth distributions of benthic invertebrates. For simplicity, substrate coverage areas are based on the area of overlying water surface. Actual substrate areas are greater since the impoundment slopes toward the center. By ignoring slope, the area of natural sediment coverage relative to tailings coverage is underrepresented since submerged natural sediment is near shore, where slopes are greater.

Based on sediment sampling conducted during June 2000 and August 2001, a variety of benthic invertebrate species exist at 13 feet depth whereas sediment is nearly devoid of benthic invertebrates at 49 feet. A diverse benthic invertebrate community ceases to exist somewhere between these depths. A common estimate of the limits of rooted plants and benthic invertebrates in lakes, based on 1% penetration of surface light, is 2x the depth where a Secchi disc is no longer visible. This equates to 26 feet in Lower Slate Lake and has been used in past memos and reports to delineate benthic productivity. However, more sophisticated light penetration profiles during August 2003 revealed that the depth of 1% light

penetration is only 13 feet. This finding is consistent with observations of rooted plants in Lower Slate Lake but, coincidentally, this is the depth where benthic invertebrate samples containing a variety of species had been collected. As such, 26 feet was retained as a conservative estimate of the maximum depth of a diverse benthic invertebrate population for this memo, consistent with past reports and memos. The maximum potential depth of benthic invertebrate colonization in the impoundment was assumed to be the same as in the existing lake.

Given the above data and assumptions, areas of potential rooted plant growth (0 to 13 feet) and benthic invertebrate colonization in natural sediment and tailings (0 to 26 feet) were calculated for the existing Lower Slate Lake and the tailings impoundment (Table 1).

Due to the increased size of the impoundment relative to the existing lake, the area of submerged natural sediment in the impoundment that receives sufficient sunlight for photosynthesis will be greater than in the existing lake. In addition, a larger area underlain by tailings will also provide substrate for aquatic plants. Studies conducted during operation will reveal if amendments will be required to accelerate plant colonization in tailings. It may be revealed that the productivity of tailings is sufficient and that amendments may result in overproduction of plants and seasonal anoxia (winterkill). The required depth to avoid winterkill will be refined through studies conducted in neighboring lakes during operation. For this memo it is assumed that 20 feet is sufficient to avoid winterkill given the stained water in the watershed and the resulting low productivity of the lakes.

Because the estimated depth limit of a diverse benthic invertebrate population in Lower Slate Lake is 26 feet and the maximum impoundment depth is 20 feet, the entire impoundment can potentially be colonized by benthic invertebrates. Because the area of productive submerged natural sediment in the impoundment is equal to that in the existing lake, even marginal colonization in tailings would result in a larger benthic population than in the existing lake. Based on extensive habitability testing already conducted, the entire impoundment will be extensively colonized by benthic invertebrates and will far exceed the existing community. The above information is summarized in Table 1 and Figures 1 through 4 of this memo.

The habitability testing was conducted using an *in situ* experiment in Auke Bay and standard EPA marine and freshwater sediment habitability testing under laboratory conditions. All of the testing involved the conservative comparison of habitability in tailings immediately after the milling process vs. natural sediment collected from freshwater and marine waterbodies, including Lynn Canal and Lower Slate Lake. The overwhelming conclusion from these experiments was that Kensington tailings are as habitable by benthic invertebrates as natural aquatic sediment. The most powerful experiment was in Auke Bay where over 100 different species colonized Kensington tailings in a matter of months. This complex community in tailings was indistinguishable from the community that colonized natural marine sediment based on univariate and multivariate statistical techniques.

The only notable exception to the habitability tests results was poor survival of a freshwater amphipod

species under laboratory conditions. The test methodology was overly conservative in that tailings were not first suspended in flow-through test water. Rather, the tailings, while saturated with process water, were placed in the bottom of the test chambers and water was slowly added on top of the tailings. After two volume turnovers, the burrowing amphipods were added. Good growth of surviving amphipods and differences in basic water chemistry of water overlying tailings relative to the Slate Lake sediment for the first 24 to 48 hours of the test suggest that interstitial, residual process water early in the test was the source of mortality. The test represented benthic conditions at the point of discharge during operation and is not relevant to the issue of recolonization after closure, although it is notable that a freshwater midge larvae thrived in tailings under the same conditions.

Given the above information and data from marine and lake tailings disposal operations in Canada, it would be extremely conservative to consider the possibility that tailings will not be colonized by benthic invertebrates. Nonetheless, the acreage of submerged natural sediment in the Kensington impoundment will be equal to the acreage of productive benthic substrate in the existing lake. Furthermore, all of the submerged natural sediment will be covered by ≤ 9 ft of water, so the area of natural substrate that could support rooted plants in the impoundment would exceed that in the existing lake by 5 acres. As such, the worst-case scenario provides mitigation in the form of increased benthic productivity.

Increased benthic productivity as mitigation is considerably greater under the more realistic scenario of

rapid or eventual benthic invertebrate colonization in tailings. The area of productive benthic substrate in Lower Slate Lake would increase from 11.3 acres to 55.6 acres, nearly a five-fold increase.

Table 1. Zonation of Lower Slate Lake and the tailings impoundment based on water surface area overlying bottom types. The tailings impoundment was sized so that the area of submerged natural sediment (11.3 ac) would equal the existing area of productive sediment in Lower Slate Lake

Bottom type	Lower Slate Lake acreage (natural sediment)	Tailings impoundment acreage		
		Natural sediment	Tailings	Impoundment total
rooter plants and benthic invertebrates	6.3	11.3	18.4	29.8
benthic invertebrates (deeper than and including rooted plants)	11.3	11.3	44.3	55.6
unproductive	9.0	0	0	0
total	20.3	11.3	44.3	55.6

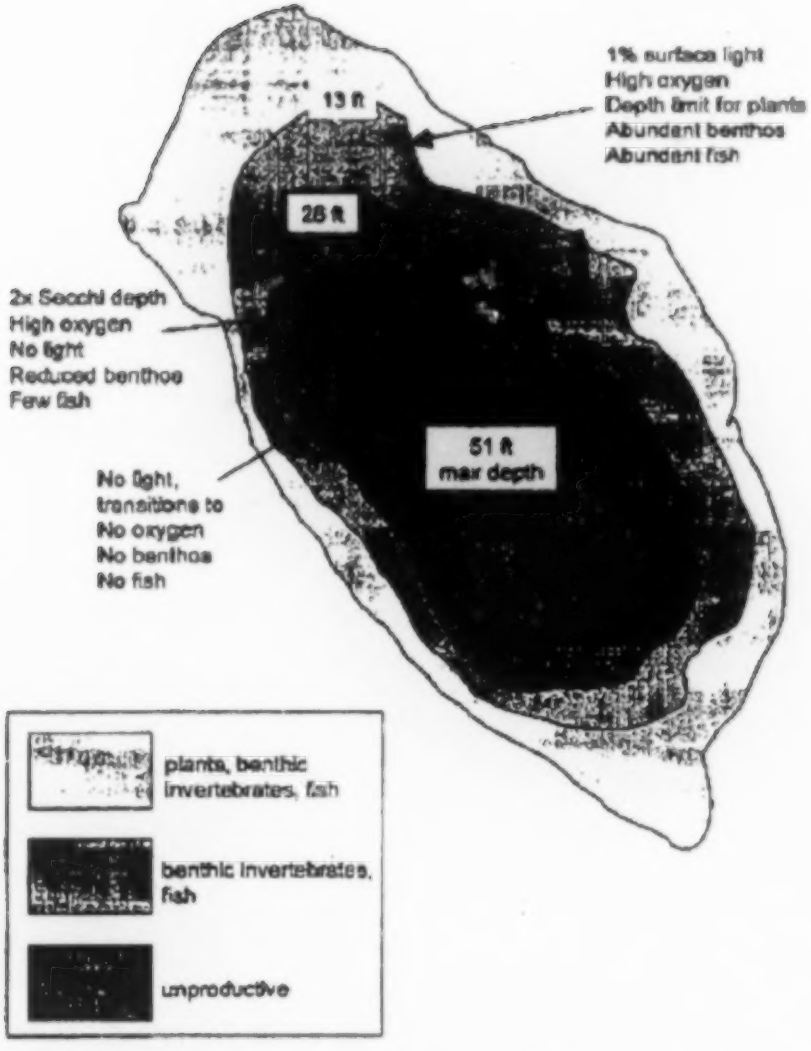

Figure 1. Zones of benthic productivity in Lower Slate Lake and measured conditions in the lake.

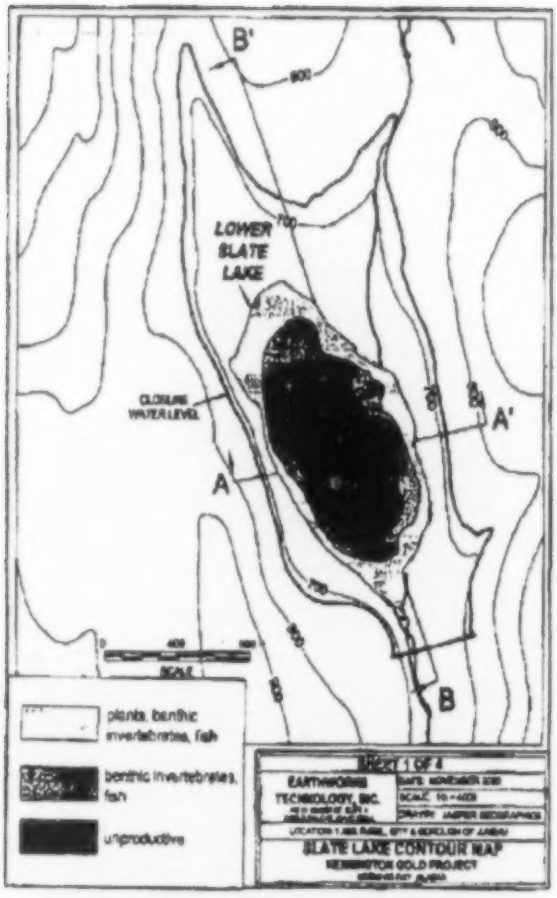

Figure 2. Zones of benthic productivity in Lower Slate Lake superimposed on a topographic map with the outline of the proposed final water level of the tailings impoundment.

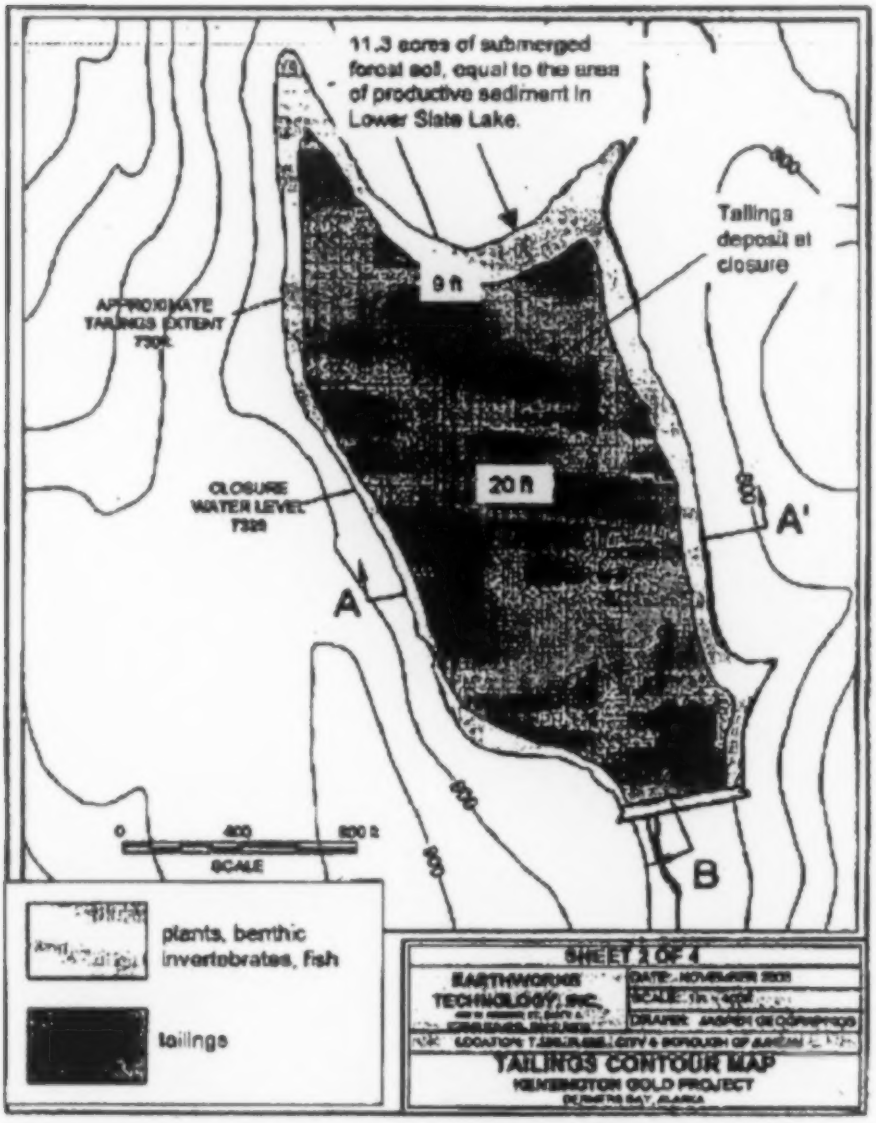

Figure 3. Zones of benthic productivity in the Lower Slate Lake tailings impoundment prior to recolonization of tailings.

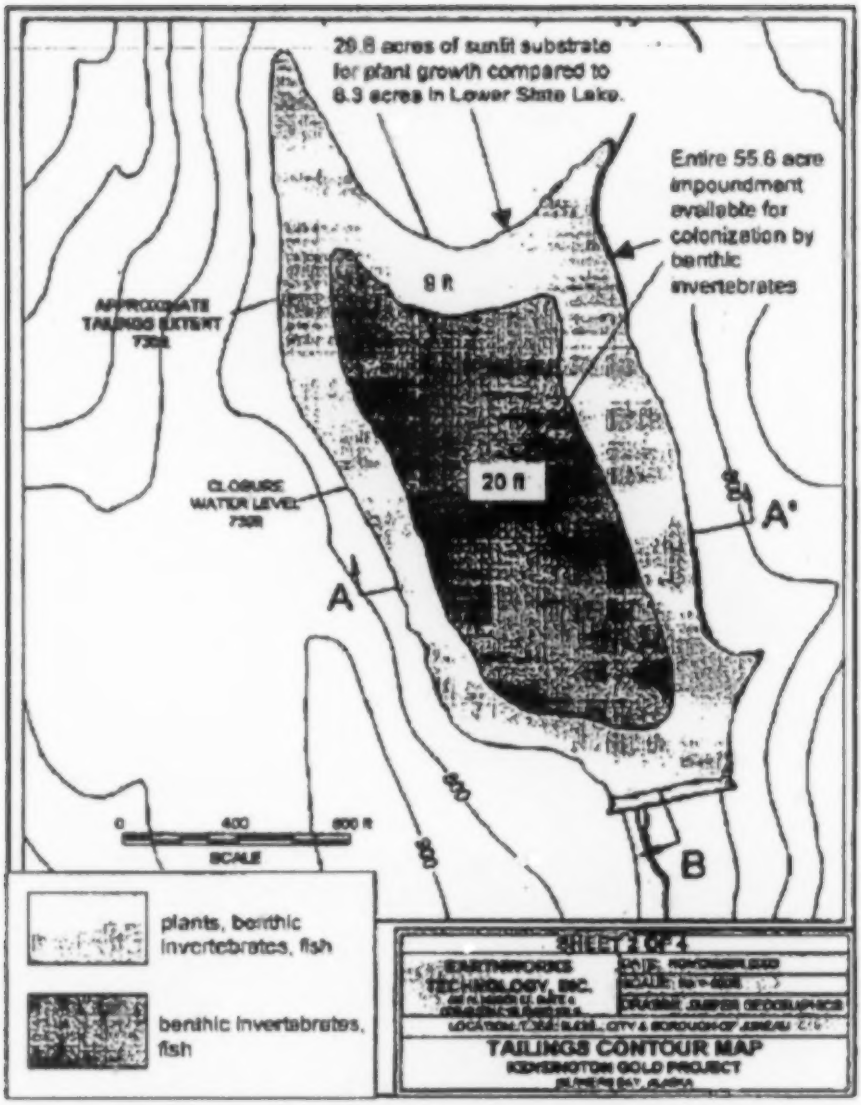

Figure 4. Zones of benthic productivity in the Lower State Lake tailings impoundment after recolonization of tailings.

APPENDIX F

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Office of Water

May 17, 2004

MEMORANDUM

SUBJECT: Clean Water Act Regulation of Mine Tailings

FROM: Diane Regas [s/Diane Regas]
Director, Office of Wetlands, Oceans and Watersheds

James A. Hanlon [s/James A. Hanlon]
Director, Office of Wastewater Management

Geoffrey H. Grubbs [s/Geoffrey H. Grubbs]
Director, Office of Science and Technology

TO: Randy Smith
Director, Office of Water, Region X

Thank you for your recent inquiry regarding the Clean Water Act (CWA) regulation of activities in waters of the United States associated with hard rock mining in Alaska and, more specifically, discharges of mine tailings from the proposed Kensington Mine. Your questions focus on the applicability of CWA sections 404 and 402 to the placement of mine tailings in impounded waters of the United States.

We have coordinated this matter with your staff in Region X and the Alaska Operations office, several offices within EPA Headquarters, and officials at the Headquarters and Alaska District offices of the Army Corps of Engineers (Corps). This memorandum serves to provide the clarification Region X and the Alaska District are seeking with regard to this issue, This memorandum describes a regulatory framework and how it applies to a general set of facts.[1] It does

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[1] While these questions have arisen in the context of a revised proposal being considered for the Kensington mine project, the regulatory approach outlined in this memorandum is generally applicable to other comparable mining proposals. The Kensington proposal, as we understand it, would involve the construction of a dam to impound the waters of Slate Creek and Lower Slate Lake and the placement of gold mine tailings into the impoundment created in Lower Slate Lake pursuant to an individual 404 permit and a subsequent discharge from the impoundment back to Slate Creek waters. The determination of which CWA permitting program applies to a particular discharge of mine tailings is fact-dependent and, in part, turns on the effect of the particular discharge on the receiving waterbody in question. This

[Footnote continued on next page]

not represent decisions about the suitability of a permit for any particular project.

EPA and the Corps agree that the discharge of fill material to construct the dam for a tailings impoundment as well as the discharge of the mine tailings into the impoundment is subject to permitting under CWA section 404, which governs the discharge of dredged or fill material. EPA and the Corps also agree that any discharge of pollutants from the impoundment to a downstream water (such as Slate Creek in the Kensington project) is subject to CWA Section 402, the National Pollutant Discharge Elimination System (NPDES) program. This discharge from the impoundment, like any discharge needing an NPDES permit, is subject to effluent limitations based on technology-based standards (e.g., any applicable effluent guidelines such as 40 C.F.R. Part 440) and any more stringent limits needed to comply with state water quality standards.

2002 Rulemaking Defining "Fill Material" and "Discharge of Fill Material"

Under section 404 of the CWA, the Corps (or an authorized State) issues permits for discharges of dredged or fill material into waters of the United States. Discharges of all other pollutants into waters

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[Footnote continued from previous page]

memorandum is specific to impoundments and thus our analysis today focuses solely on the discharge of mine tailings into impoundments designed to hold such materials. Any other type of proposed project, such as open water disposal of mine tailings or any other similar materials, would be subject to a different regulatory analysis.

of the U.S. are subject to permits issued by EPA (or authorized States) under the NPDES program. To bring greater clarity and consistency to how EPA and the Corps regulate discharges of pollutants, the agencies recently revised their regulatory definitions of "fill material" and "discharge of fill material." 67 Fed. Reg. 31129 (May 9, 2002). The regulations now define "fill material" as material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of the water. 67 Fed. Reg. 31130; *see also* 40 C.F.R. §232.2; 33 C.F.R. §323.2(e). Examples of fill material, as defined by the regulations, include overburden from mining and materials used to create any structure or infrastructure in waters of the United States. Similarly, the phrase "placement of overburden, slurry, tailings or similar mine-related materials" was added to the definition of "discharge of fill material" to provide further clarification as to the type of activities generally regulated under section 404. See 40 C.F.R. §232.2; 33 C.F.R. §323.2(f).

We believe that the text of the rule makes clear that mine tailings placed into impounded waters of the U.S., as proposed by the Kensington mine project, are regulated under section 404 of the CWA as a discharge of fill material, and that effluent discharged from the impoundment to a downstream water, such as Slate Creek is covered by section 402. Mine tailings placed into the proposed impoundment will have the immediate effect of filling the areas of water into which they are discharged and therefore fall within the scope of section 404. As a result, the regulatory regime applicable to discharges under section 402, including effluent limitations guidelines and standards, such as those applicable to gold ore

mining (see 40 C.F.R. Part 440, Subpart J), do not apply to the placement of tailings into the proposed impoundment. See 40 C.F.R. §122.3(b). This result is confirmed by the preamble to the rule which explained the dividing line between section 402 discharges and section 404 discharges by noting that EPA would continue to regulate under section 402 "discharges (such as suspended or settleable solids) [that] can have the associated effect, over time, of raising the bottom elevation of a water due to settling of waterborne pollutants." 67 Fed. Reg. 31135. Here, the effluent discharged from the impoundment into Slate Creek will contain pollutants in the form of suspended and settleable solids, materials that will have, at most, an incidental filling effect. The addition of those pollutants to the Creek from this impoundment associated with an industrial operation would therefore be subject to regulation under section 402.

In sum, under both the plain language of the rule and the Agencies' interpretation of the regulation in its preamble, the mine tailings that are to be placed into an impoundment are covered by section 404 and effluent discharges from the impoundment into a receiving water are subject to permitting under section 402.

The Waste Treatment Exclusion

In 1992, EPA and the Corps were approached to address CWA regulation of the Kensington project, as then proposed, and a related mining proposal, the A-J Mine. Under the approach articulated in the 1992 memorandum from then EPA Assistant Administrator LaJuana Wilcher to the Region's Water Director Charles Findley regarding the A-J and Kensington proposals, issuance of a section 404 permit

for the impoundment of waters for mine tailings would, under certain circumstances, create a waste treatment system that was excluded from the, regulatory definition of "waters of the United States." In those circumstances, neither a section 404 permit nor a section 402 permit would be required to discharge tailings into the treatment system. A section 402 permit would be needed for any discharge of pollutants from the treatment system into waters of the United States. The 1992 memorandum provided that, as part of the analysis required under the section 404(b)(1) Guidelines, the physical impacts of the discharge of mine tailings into the system also would be considered.

The 1992 memorandum, however, was developed to clarify the regulatory approach to discharges of mine tailings in light of the Corps' and EPA's then differing definitions of "fill material" and "discharge of fill material." Our current analysis of how the 2002 rulemaking applies to the permitting of discharges of mine tailings into impounded waters will help to ensure a more effective environmental review of any adverse impacts associated with these types of projects. The rulemaking did not, however, alter EPA's interpretation of the waste treatment exclusion contained in 40 C.F.R. §122.2. While the permitting framework described in this memorandum does not invoke the exclusion for the discharge of mine tailings to impounded waters, neither does it preclude its use for waste treatment systems or system components that meet the definition in 40 C.F.R. §122.2.

Applicability of State Water Quality Standards

You also have asked how water quality standards would apply to the permitting of this project

under section 404. The regulatory approach articulated in this memorandum does not alter the manner in which water quality standards currently apply under section 404 of the CWA or, in particular, how they would apply to the Kensington proposal.

With regard to the Kensington Mine project, we understand that the company's current proposal would result in a tailings pile behind the dam that is some 54 feet above the current water level in Slate Lake and, in the process, result in filling the entire Lake.[2] In addition to the analysis of the availability of upland alternatives, the Corps' environmental review of the project under the section 404(b)(1) Guidelines must specifically consider compliance with water quality standards and the chemical, physical, and biological impacts associated with the proposed conversion of waters to non-waters that are contemplated to result from the discharge of fill material. Before a section 404 permit may be issued, the Corps must conclude, among other determinations, that the proposed project would not cause or contribute to significant degradation after all practicable steps have been taken to avoid and minimize environmental impacts and to mitigate for remaining adverse aquatic impacts.

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[2] Additionally, we understand that there may be some water on top of the disposal site after the conclusion of the permitted activity. Any determination by the government to reassert CWA jurisdiction over this water would generally not occur until after site reclamation has been completed consistent with an approved mine reclamation plan.

In addition, under the Guidelines, "no discharge of dredged or fill material may be permitted if it causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State water quality standard." 40 C.F.R. §230.10(b)(1). In circumstances like the proposed Kensington mine, the Guidelines do not require that the proposed discharges comply with water quality criteria within the impoundment since the impoundment is the "disposal site" proposed to be authorized to be filled under the Corps' section 404 permit. The regulations define "disposal site" as "that portion of the 'waters of the United States' where specific disposal activities are permitted and consist [sic] of the bottom surface area and any overlying volume of water." 40 C.F.R. §230.3(i).

In this particular case, because the entire lake is proposed to be within the permitted disposal site specified under section 404(a), the section 404(b)(1) Guidelines require the Corps to consider, during the permitting process, whether the discharge of fill material would cause or contribute to a violation of water quality criteria or impairment to designated uses in the adjacent waters of Slate Creek (i.e., waters outside the impoundment). The State, in making decisions with regard to water quality certification, determines whether the project would cause or contribute to a violation of water quality standards, at a minimum, in waters upstream or downstream (outside) of the disposal site, considering, among other factors, whether future discharges from the impoundment to downstream waters will meet

discharge limits that assure compliance with applicable downstream water quality standards.[3]

State water quality standards also include antidegradation policies consistent with 40 C.F.R. §131.12. EPA interprets section 131.12(a)(1) of the federal requirements for antidegradation policies to be satisfied with regard to fills in waters if the discharge will not result in "significant degradation" as defined under section 230.10(c) of the section 404(b)(1) Guidelines. See Water Quality Standards Handbook, 2d Ed. (U.S. EPA Aug. 1994), at 4-5. Accordingly, unless a state indicates otherwise, a discharge of fill material which complies with the "no significant degradation" requirement of the Guidelines would be considered also to satisfy the "existing uses" requirement of the state's antidegradation policy.

I appreciate the assistance you and your staff have provided on this matter. I trust that the information provided in this memorandum meets your needs. Should you have any additional questions, please contact me or have your staff contact John Meagher at 202-566-1353.

cc: Major General Strock
Director of Civil Works

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[3] States retain the authority to adopt use designations for waters that prohibit or substantially restrict discharges into certain waters, such as outstanding natural resource waters (see 40 C.F.R. § 131.12(b)(3)) and to protect those uses through the exercise of their certification authority.

APPENDIX G

KLINE
ENVIRONMENTAL
RESEARCH, LLC

1731 50th Street
Somerset, WI 54025
Phone: (715) 247-4466
Fax: (715-247-4608
E-mail: kline@pressenter.com

TECHNICAL MEMORANDUM

To: Rick Richins

From: Ed Kline

Subject: Time required for benthic recolonization in the Kensington tailings storage facility

Date: August 17, 2004

Summary

This technical memorandum provides information to supports the following conclusion:

> A diverse and abundant benthic invertebrate community will remain in the submerged natural sediment around the perimeter of the Kensington tailings storage facility (TSF) throughout the operation. The width of this colonized band of natural sediment will vary during operation, but will be present at closure to contribute to rapid colonization of tailings after deposition ceases, and rapid colonization of newly submerged sediment as the water is raised to the final closure eleva-

> tion. Airborne introduction and inflow from Upper Slate Lake will also contribute to colonization throughout the entire TSF during the first seasonal pulse of invertebrate recruitment after closure. A diverse and abundant benthic invertebrate community will be established ≤1 year after closure in the 11 acres of submerged natural sediment and ≤6 years after closure in the remainder of the TSF that will be underlain by tailings. As such, ≤1 year after closure, the TSF will have a larger area of productive lake bottom than currently exists and there will then be no constraints to reestablishing populations of fish, plants, and wildlife that will meet or exceed the diversity and productivity of the existing Lower Slate Lake community. Additional information on the method of discharge and rates of tailings consolidation after closure may allow the ≤6 year prediction pertaining to tailings to be reduced.

A variety of approaches were used to reach this conclusion. Each approach, when viewed in isolation, supports the conclusion. The weight of evidence from the combined approaches provides assurance that the conclusion is conservative. Habitability testing demonstrated that colonization of Kensington tailings will begin with the first seasonal pulse of invertebrate recruitment after closure, but that establishment of some species may be limited until the organic content of the surface layer of tailings increases through natural processes, or until dilute process water in the surface layer of tailings becomes further diluted by overlying lake water. Toxicity testing and chemical analyses have shown that Kensington process water is near the threshold of

toxicity for some species due to organic milling reagents and/or an imbalance of common ions. An abundance of invertebrates found during 2004 in metal-rich tailings in an impoundment that contained highly toxic concentrations of interstitial cyanide after closure in 1998 demonstrates that any potential lag in habitability due to low organic content or process water will be less than six years. All of the above studies support previous demonstrations that Kensington tailings have low metal concentrations, low metals bioavailability, and low reactivity.

* * * * *

... examples, recruitment was limited to airborne sources and/or initial productivity was dependent on the water column, yet benthic colonization was rapid.

It is this literature that supports the prediction that an invertebrate population will persist along the margin of the TSF during operation. This literature also allowed the conclusion to be drawn that the 11 acres of natural sediment will become colonized by a diverse and abundant invertebrate community ≤1 year after closure of the TSF. Given that the 11 acres will not be lacking in organic matter, the TSF will have a water link to a nearby lake, and much of the literature demonstrates dense and diverse invertebrate colonization after weeks or months in new reservoirs and ponds, the predicted ≤1 year return to productivity should be considered conservative. Finally, the opportunistic feeding habit of Dolly Varden eliminates the need for academic definitions on the specific meaning of "diverse and abundant invertebrate community". In short, the reclamation objectives will be met because numerous and varied benthic invertebrates will be available for Dolly Varden to feed on, in addition to sticklebacks which

are abundant and will naturally be introduced from Upper Slate Lake.

Research Recommendations

- Develop a prediction of the percent process water versus lake water that will comprise the interstitial water of the settled tailings after closure.
- Develop tailings consolidation curves for Kensington and Golden Cross for comparison of process water release rates after closure.
- Calculate the approximate area of submerged natural sediment at various points in time during operation through to closure, prior to submersion of the final 11 acres.
- Conduct invertebrate surveys in natural sediment and tailings during operation in the TSF. Use the results to refine the reclamation plan, with the expectation that the predicted time for colonization in tailings may decrease.

References

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APPENDIX H

STATE OF ALASKA
Frank H. Murkowski, Governor
410 Willoughby Ave., Ste. 303
Juneau, AK 99801-1795
PHONE: (907) 465-5180
FAX: (907) 465-5177
http://www.state.ak.us/dec

DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER

RECEIVED
DEC 0 9 2004
GENPA - CO - R - E - JFO
Alaska District Corps of Engineers

December 6, 2004

John Leeds, III
Department of the Army
U.S. Army Engineer District, Alaska
Juneau Regulatory Field Office
8800 Glacier Highway, Suite 106
Juneau, Alaska 99801-8079

Re: Kensington Mine Section 404 Permit

Dear Mr. Leeds:

The Alaska Department of Environmental Conservation (DEC), in coordination with the State Large Mine Team, is considering the application from Coeur Alaska for a Clean Water Act (CWA) Section 404 permit to discharge mine tailings to the Lower Slate Lake disposal site. DEC is conducting this work as part of the State's authority to certify the permit under Section 401 of the CWA.

At this point in our analysis we have looked closely at the characteristics of the tailings and wanted to inform you of our findings and provide some preliminary thoughts about our CWA Section 401 certification. Our efforts have included internal review of available data and reports. We also contracted with Ecology and Environment, Inc. to review and summarize available data on both the potential toxicity and the acid generating potential of the mine tailings (see enclosure).

In general, we have concluded that available information suggests that the toxicity risks associated with the tailings will be low both during and after mining operations. A number of marine and freshwater tests show no toxic effects associated with the tailings. While one freshwater bioassay result suggests that the combination of tailings and undiluted residual milling reagents may have the potential to cause toxic effects, the generally low metals content of the tailings leads us to suspect that the milling reagents may be responsible for the observed effect. Another freshwater bioassay using a different organism found no statistical difference between the toxicity of the combination of tailings and undiluted residual milling reagents when compared to Lower Slate Lake sediments.

Despite some suggestion in the one test result that undiluted residual milling reagents have the potential to cause toxic effects, we note that there will always be substantial dilution of residual milling reagents in the disposal facility during actual operations. We expect to work with the U.S. Environmental Protection Agency in our certification of the CWA Section 402 permit to include permit limits that guard against the potential for toxic effects from

any residual milling reagent constituents of the discharge to Slate Creek.

As for post-closure re-colonization of the tailings by benthic organisms, our review suggests nothing to lead us to suspect that tailings toxicity would preclude or hinder re-colonization. To contend with the inevitable uncertainty about how long re-colonization will take, we are considering including in our certification of the CWA Section 404 permit contingency measures, such as adding organics to or capping deposited tails, in the event they are needed to ensure or speed re-colonization.

We can be most definitive about the acid-generating potential of the tailings. Results of a substantial number of tests performed on the acid generating potential of the tailings suggest that there is virtually no risk either during or after mining operations.

Finally, to guard against the potential for significant changes in tailings toxicity or acid generating potential over the course of mining operations, we expect to require as a condition of our certification periodic testing of tailings characteristics.

I hope you find this interim information useful. Please contact DEC's Project Manager, Pete McGee, at (907) 451-2101 if you have questions or if we can provide additional information or analysis.

Sincerely,

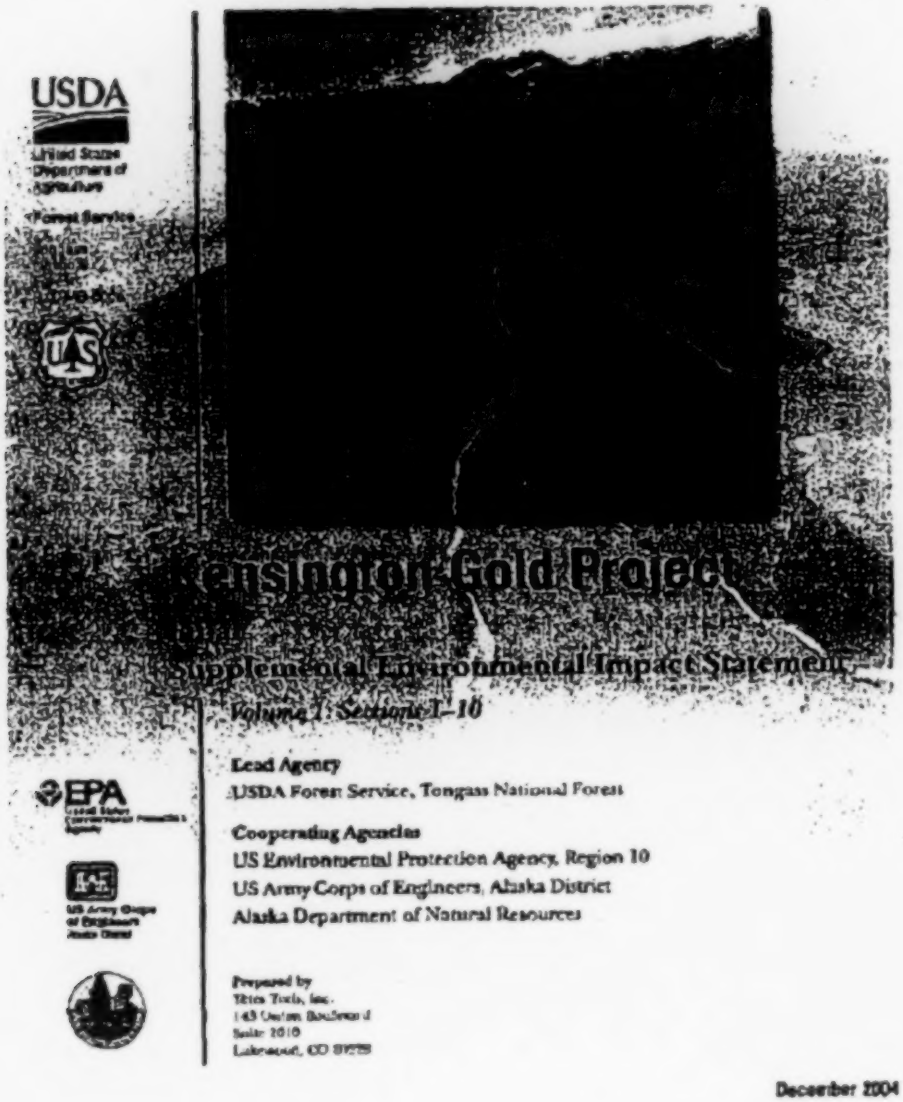
/s/Dan Easton

Dan Easton, Director
Division of Water

Enclosure

cc: Ed Fogels, State Project Manager
Pete McGee, DEC Project Manager

APPENDIX I



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Kensington Gold Project

Final

Supplemental Environmental Impact Statement

Volume 1 of 2
Sections 1–10

United States Department of Agriculture
Forest Service
Tongass National Forest
R10-MB-500a

December 2004

SECTION 1.0
PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 BACKGROUND

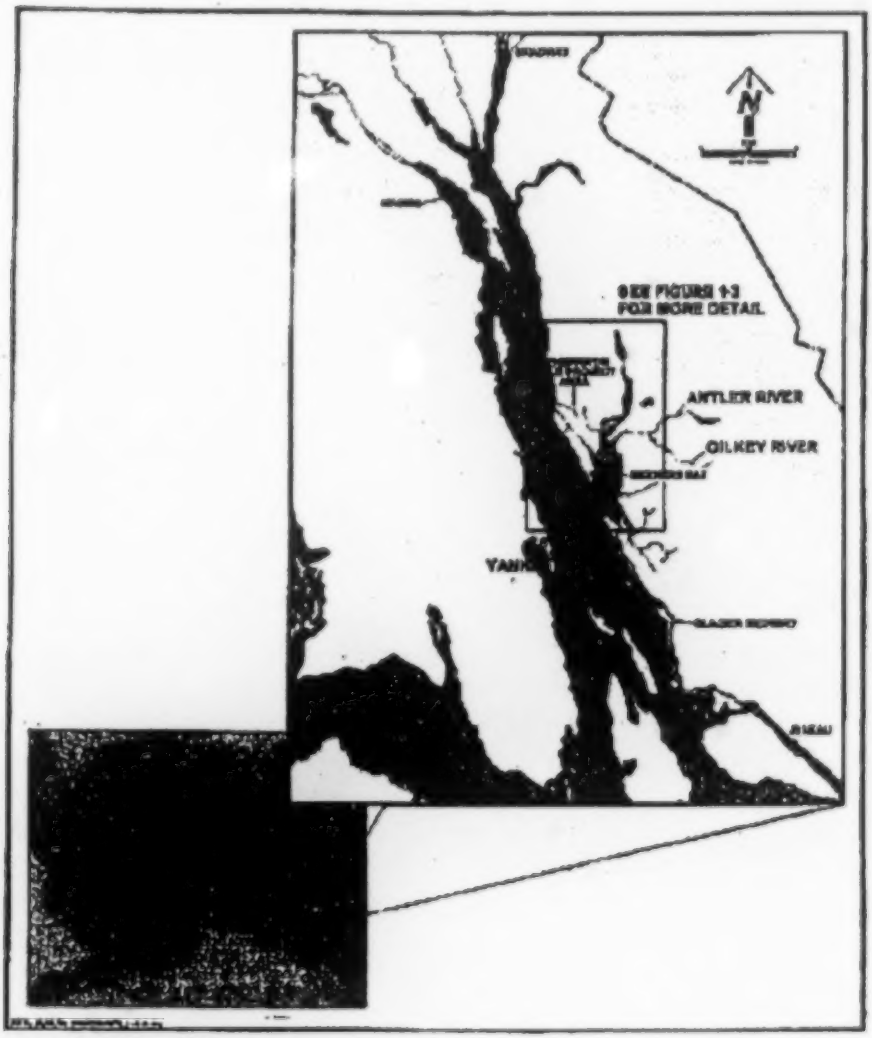
The Kensington Gold Project is a permitted underground gold mine approximately 45 miles north-northwest of Juneau, Alaska (Figure 1-1). Coeur Alaska, Inc. (Coeur), the project operator, maintains a wastewater treatment plant, including settling ponds, near the 850-foot portal in the vicinity of the Kensington Mine site. The settling ponds treat mine drainage and are authorized to discharge to Sherman Creek under a National Pollutant Discharge Elimination System (NPDES) permit. A waste rock pile resulting from exploration activities is in the same vicinity. A small personnel camp at Comet Beach houses workers conducting maintenance activities at the site. The mine received all permits required to begin construction and operations following publication of the 1997 *Kensington Gold Project Final Supplemental Environmental Impact Statement* (1997 SEIS) and issuance of a Record of Decision (ROD).

Coeur has not yet constructed the mine. A desire to improve efficiency and reduce the extent of disturbance of the approved project motivated Coeur to submit an Amended Plan of Operations (Amended Plan) to the U.S. Department of Agriculture, Forest Service, Tongass National Forest, Juneau Ranger District (Forest Service). The Amended Plan forms the basis for this Final SEIS.

This Final SETS represents the third time the Kensington Gold Project has undergone a review under the *National Environmental Policy Act* (NEPA). In 1992 the Final EIS was completed (1992 FEIS). The Kensington Venture, a joint venture between Coeur and Echo Bay Exploration Inc., initially proposed to develop the Kensington Gold Project. Their proposal, submitted to the Forest Service in 1990, described mining the Kensington deposit. The operations proposed would have used underground techniques to recover the ore, processed the ore on-site using flotation and cyanidation circuits, and disposed of the tailings in a tailings impoundment built in the Sherman Creek drainage. The impoundment would have been sized to accommodate 30 million tons of tailings. The proposal included discharging wastewater to Lynn Canal following treatment and shuttling employees to the mine site using helicopters. The operation would have used liquefied petroleum gas to fuel on-site generators. A marine terminal developed at Comet Beach in Lynn Canal would have handled supply deliveries and gold shipments. One of the alternatives not considered in detail in the 1992 FEIS involved tailings disposal in Slate Lakes. This was eliminated from further consideration in large part because of difficulties of and disturbance associated with transporting tailings from the mill in the Sherman Creek drainage. At the time, the Jualin claims were under separate ownership.

The Kensington Venture never obtained all the permits necessary to build the mine, and in 1995 Coeur became the sole stakeholder in the property. Coeur then submitted an Amended Plan of

Operations to the Forest Service in September 1995. Coeur's 1995 Plan of Operations included the same mining and tailings disposal scenario but proposed enhanced treatment of the tailings wastewater and a discharge to Sherman Creek rather than Lynn Canal. The proposal also included backfilling the cyanidation tailings and changing the fuel source from liquefied petroleum gas to diesel. The Forest Service published a Notice of Intent to prepare a supplemental environmental impact statement for the proposed changes, and scoping meetings were held in October 1995 to solicit public comments on the project.



Source: Forest Service, 1997a

FIGURE 1-1. GENERAL PROJECT AREA (APPROXIMATELY 48 MILES NORTHWEST OF JUNEAU)

In response to comments received during the scoping process and meetings with federal, state, and local agencies, Coeur again revised its Plan of Operations and resubmitted it to the Forest Service in June 1996. The 1996 plan called for the elimination of on-

site cyanidation in favor of shipping flotation concentrate off-site for gold recovery. The 1996 plan also proposed the construction of a dry tailings facility (DTF) on a "terrace area" between Sherman and Sweeny creeks and the backfilling of at least 25 percent of the tailings. Runoff from the DTF would be collected in a settling pond and discharged to Camp Creek (a small creek within the terrace area) under an NPDES permit.

The Forest Service held a second round of scoping meetings to solicit input on the 1996 plan. The Forest Service then completed the 1997 SEIS and identified Alternative D as the Selected Alternative in the 1997 ROD. Alternative D, the currently permitted project, consists of site access from Comet Beach, helicopter transport of employees, wastewater discharge to Sherman Creek, and construction of a DTF for tailings disposal.

Coeur submitted an Amended Plan of Operations for the Kensington Gold Project to the Forest Service in November 2001. The Amended Plan proposes a number of changes to the approved plan, such as changing the location of the milling facilities, tailings disposal, and site access and employing a different means of employee transportation. The operation would also mine a smaller portion of the ore body than that proposed under previous iterations. The Amended Plan proposes to use a dock to be built at Cascade Point on state tidelands adjacent to property held by Goldbelt Incorporated (Goldbelt), an Alaska Native corporation.

The Forest Service completed an EIS for the Cascade Point Access Road and issued a ROD in March 1998. The EIS and the ROD addressed access to Goldbelt's property across Forest Service lands but did not in-

clude an impact analysis for construction of a dock. Following Goldbelt's submittal of a *Clean Water Act* (CWA) Section 404 permit application for the facility in 1999, the U.S. Army Corps of Engineers (USACE) evaluated the potential effects of a dock at the site. The USACE denied the permit at the time, citing a lack of demonstrable need for the facility, as well as a number of environmental concerns.

The Forest Service directed the preparation of this Final SEIS by a third-party contractor, Tetra Tech, Inc. The U.S. Environmental Protection Agency (USEPA), USACE, and Alaska Department of Natural Resources (ADNR) participated as cooperating agencies with the Forest Service in preparing this Final SEIS (under Title 40 of the *Code of Federal Regulations* [CFR] Section 1501.6). The Forest Service requested that the National Marine Fisheries Service (NMFS) also participate as a cooperating agency although NMFS declined (Kurland, 2003). This Final SEIS was developed to evaluate the operator's proposed changes to the approved Plan of Operations for the mine on National Forest System lands and a dock on state tidelands at Slate Creek Cove. Other components include construction of a dock facility on state tidelands and private lands at Cascade Point. Approval for components not on National Forest System lands will be accomplished through other state and federal agencies with jurisdiction. This SEIS is intended to supplement the 1997 SEIS and 1992 FEIS. Information from the previous documents has been brought forward into this document to the extent practicable so the reader will not necessarily need to refer back to the previous analyses. According to requirements in the Council on Environmental Quality regulations for implementing NEPA (40 CFR Part 1500), this document

analyzes and discloses the direct, indirect, and cumulative impacts associated with the proposed changes to the approved Plan of Operations.

The document is structured to present the project background and information on regulatory compliance in this section. Section 2.0 describes the Proposed Action along with alternatives to the Proposed Action. Section 3.0 describes the environment that would be affected by the Proposed Action or alternatives. Section 4.0 discusses the environmental consequences of the Proposed Action and alternatives.

The following appendices are included at the end of the document to provide additional information:

A. Water Quality Analysis

B. Essential Fish Habitat Assessment

C. Ecological Risk Assessment of Aqueous Tailings Disposal at the Kensington Gold Mine

D. Preliminary Reclamation Plan

E. Best Management Practices and Mitigation Measures

F. Old-Growth Habitat

G. Ground Water Quality

H. Migratory Birds: Birds of Conservation Concern and Priority Species

I. CBJ Notices of Decision

J. Biological Assessment/Biological Evaluation (BA/BE)

K. USEPA and State of Alaska Preferred Alternative and Environmentally Preferable Alternative Letters

L. Draft SEIS Comment Letters and Forest Service's Responses

1.2 PURPOSE AND NEED

The purpose of the Proposed Action is to consider certain changes to the 1998 approved Plan of Operations for the Kensington Gold Project regarding access, tailings disposal, and support facilities. The Proposed Action is needed to improve efficiency and reduce the area of surface disturbance.

The proposed changes are intended to provide more reliable transportation and access by improving worker safety during transit to the site and eliminating shipping delays related to weather and sea conditions at Comet Beach. The improved reliability of access would allow Coeur to reduce the amount of fuel storage, as well as inventories of materials and supplies.

The proposed changes are also intended to reduce the area of disturbance compared to the approved plan and to be more efficient in terms of operational cost and material handling. There would be no requirement to dewater the tailings, no trucking associated with hauling and placement, and two of the sand and gravel borrow pits would be eliminated.

1.3 PROPOSED ACTION

The Forest Service proposes to approve certain changes to an existing plan of operations based on an Amended Plan of Operations submitted by Coeur in November 2001. Under the currently approved plan, all mining operations would take place in the vicinity of the Kensington Mine. Under the Proposed Action, the mill and administrative facilities would be built in the Johnson Creek drainage in the vicinity of the

Jualin Mine, Supplies and ore concentrate would be shipped into and out of the facility by barge via a dock in Slate Creek Cove, in Berners Bay. A more selective mining plan would be followed. The ore processing methods used would be the same as those under the approved plan; however, access to the ore body would be through a 12,000-foot-long tunnel connecting the Jualin Mine to the Kensington Mine. Tailings would be disposed of in a tailings storage facility (TSF) built in Lower Slate Lake. Employee housing would be eliminated in favor of a daily crew shuttle boat service that would operate between Cascade Point and Slate Creek Cove. The existing road between Slate Creek Cove and the Jualin Mine would be upgraded to handle mine-related traffic. Treatment of the mine water and storage of waste rock would occur near the Kensington 850-foot portal in the Sherman Creek drainage. Figure 1-2 shows the location of the project area, including Sherman Creek and Berners Bay.

1.4 DECISIONS TO BE MADE

The Forest Supervisor of the Tongass National Forest is the responsible official for deciding whether to select the Proposed Action or another alternative for implementation. The Forest Supervisor will identify any additional mitigation measures and monitoring required for this project. His decision will be documented in a ROD, which will include the reasons for his decision based on the analyses presented in this Final SEIS. It should be noted that in the case of this document, the No Action Alternative is not a "no-build" alternative. Selection of the No Action Alternative as a result of this Final SEIS would deny the proposed changes to the currently approved operating plan but would allow the company to proceed

under the terms of the ROD for the 1997 SEIS and the approved operating plan. A No Action Alternative that considered the effects of no mining in the project area was evaluated in the 1992 FEIS.

The Director of the Office of Water and Watersheds for USEPA Region 10 will decide whether to issue a permit under Section 402 of the Clean Water Act, and what terms and conditions apply. USACE will also decide whether to issue permits under Section 404 of the Clean Water Act. Section 1.7 below provides additional information on agency responsibilities.

1.5 SCOPING AND PUBLIC INVOLVEMENT

The Notice of Intent to prepare this SEIS for the Kensington Gold Project was published in the *Federal Register* on September 13, 2002. The publication of the Notice of Intent started the scoping process, a public review and comment period required under NEPA (40 CFR 1501.7). The formal scoping comment period ended on October 15, 2002.

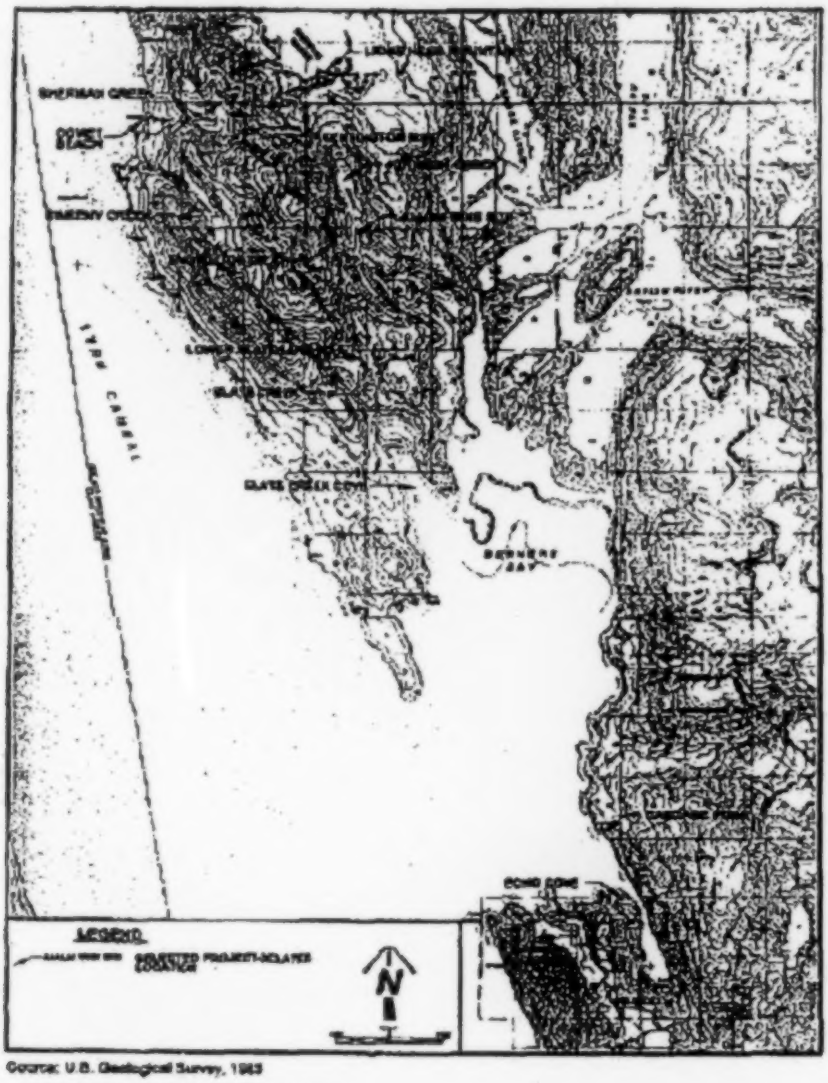
Scoping is a public participation process with several objectives:

- Provide the public, tribes, and regulatory agencies with a basic understanding of the Kensington Gold Project and the proposed changes to the mine's Amended Plan of Operations.
- Provide opportunities for people to ask questions, voice concerns, identify specific issues, and recommend options other than those proposed by the mine operator.
- Ensure that potentially significant issues from the public, tribes, and agencies are identified and

fully addressed during the course of the EIS process.

- Explain where people can find additional information about the project.

The Forest Service sent email notification of the Notice of Intent, as well as an electronic link to a copy of the scoping document, to approximately 40 agencies, tribes, organizations, and private individuals that had previously expressed interest in the project. The scoping document provided a brief history of the Kensington Gold Project dating back to 1990; numerous maps; discussions on the proposed action, agency involvement, permits and authorizations, and the scoping process; an SEIS preparation schedule; and information sources.



Source: U.S. Geological Survey, 1983

FIGURE 1-2. SPECIFIC PROJECT AREA

SECTION 2.0
DESCRIPTION OF PROPOSED ACTION AND OTHER ALTERNATIVES

This section describes the alternatives that form the basis for evaluating the current proposal for the Kensington Gold Project. Evaluating a reasonable range of alternatives ensures that significant im-

pacts are avoided or mitigated to the extent possible. Various project components were evaluated as part of the alternatives analysis under the previous National Environmental Policy Act (NEPA) actions associated with the Kensington Gold Project. Alternatives in this Final Supplemental Environmental impact Statement (SEIS) target project components that are different from those previously proposed and that could address the significant issues identified during the scoping process.

The alternatives evaluated in this Final SEIS focus primarily on employee housing, transportation of personnel and material to and from the site, tailings disposal and management, and the location of wastewater discharges. Since publication of the 1992 Environmental Impact Statement (FEIS) and the 1997 SEIS, the operator has continued to collect baseline data on hydrology, water quality, aquatic life, and other key environmental resources in the vicinity of the Kensington Gold Project site. These data, as well as data collected by the U.S. fish and Wildlife Service (USFWS), have been used to evaluate the feasible project alternatives and mitigation measures.

The following discussions explain the development of alternatives, present a brief description of each alternative, and describe individual project components, including tailings disposal, water management, and transportation. Section 2 closes with a description of mitigation and monitoring, a tabular comparison of impacts, by alternative, on the various resource areas discussed in greater detail in sections 3 and 4, and identification of the Forest Service's environmentally preferable alternative.

ALTERNATIVES FOR THE KENSINGTON GOLD PROJECT

Alternative A (No Action): 1997 SEIS Alternative D: Dry tailings facility (DTF) with engineered berm; wastewater discharged to Sherman Creek and DTF drainage to Camp Creek; employee transportation by helicopter; personnel camp.

Alternative A1 (Reduced Mining Rate DTF): Similar to Alternative A with smaller production rate and smaller DTF.

Alternative B (Proposed Action): Wet tailings storage facility (TSF) in Lower Slate Lake; TSF wastewater discharged to Slate Creek and mine water discharged to Sherman Creek; employee transport by daily crew shuttle boat between marine terminals at Cascade Point and Slate Creek Cove; no personnel camp.

Alternative C (TSF Diversion/Modified Dock): Same as Alternative B except diversions to route Mid-Lake East Fork Slate Creek and overland flow around the TSF; employee transport by daily crew shuttle boat between marine terminals at Slate Creek Cove and Echo Cove; minimized subtidal footprint of the Slate Creek Cove marine terminal.

Alternative D (Modified TSF Design): Same as Alternative B except that Mid-Lake East Fork Slate Creek is diverted around the TSF via a pipeline, TSF water is treated by reverse osmosis prior to discharge into diversion pipeline, and a cover is installed over the tailings.

2.1 ISSUES AND ALTERNATIVE DEVELOPMENT

The formulation of alternatives to the Proposed Action is one of the most important components of the NEPA process. Significant issues identified during the scoping process drive the formulation of such alternatives. The alternatives can alter or reduce the magnitude of potential environmental impacts associated with the Proposed Action.

The alternatives developed for this Final SEIS reflect the significant issues identified during scoping, which consist of the following:

- Mine-related transportation would adversely affect users of, and resources in Berners Bay.
- Construction and operation of the tailings storage facility (TSF) and other mine facilities would adversely affect aquatic resources from slate and Johnson creeks to Slate Creek Cove and Berners Bay.
- The Lower Slate Lake TSF, docks, access road, and other mine facilities would adversely affect the scenic character of Berners Bay for recreationists.

Table 2-1 summarizes the development of alternatives, including the No Action Alternative (Alternative A), in response to the significant issues identified during scoping.

Table 2-1
Development of Alternatives in Response to Scoping Issues

Issues	Alternative A (No Action)	Alternative A1	Alternative B (Proposed Action)	Alternative C	Alternative D
Mine-related transportation would adversely affect users of, and resources in, Berners Bay.	None of the project facilities would be located in the Berners Bay watershed or viewshed. Twelve round trips by helicopter weekly across mouth of Berners Bay.	None of the project facilities would be located in the Berners Bay watershed or viewshed. Twelve round trips by helicopter weekly across mouth of Berners Bay.	Crew shuttle boat between Cascade Point and Slate Creek Cove to transport workers; barges would deliver supplies to Slate Creek Cove.	Crew shuttle boat between Echo Cove and Slate Creek Cove to transport workers; barges would deliver supplies to Slate Creek Cove	Crew shuttle boat between Cascade Point and Slate Creek Cove to transport workers; barges would deliver supplies to Slate Creek Cove.
Construction and operation of the TSF and other mine facilities would adversely affect aquatic resources from Slate and Johnson Creeks to Slate Creek Cove and Berners Bay.	None of the project facilities would be located in the Slate Creek, Johnson Creek, or Berners Bay watersheds or viewsheds.	None of the project facilities would be located in the Slate Creek, Johnson Creek, or Berners Bay watersheds or viewsheds.	TSF constructed in Lower Slate Lake; discharge to East Fork Slate Creek; infiltration gallery in Johnson Creek; marine terminals in Slate Creek Cove and at Cascade Point.	TSF diversions would limit volume of water contacting tailings; Echo Cove marine facility would avoid herring spawning habitat.	Treatment of the TSF effluent would further protect downstream surface water quality and aquatic life. Tailings would be capped if necessary to prevent potential adverse effects on benthic organisms or fish in Lower Slate Lake.
The Lower Slate Lake TSF, docks, access road, and other mine facilities would adversely affect the scenic character of Berners Bay for recreationists.	None of the project facilities would be located in the Berners Bay watershed or viewshed. Twelve round trips by helicopter weekly across mouth of Berners Bay.	None of the project facilities would be located in the Berners Bay watershed or viewshed. Twelve round trips by helicopter weekly across mouth of Berners Bay.	Dock facilities would be located at Cascade Point and Slate Creek Cove.	Footprint of Slate Creek Cove marine terminal would be reduced in size; crew shuttle dock would be placed in Echo Cove north of existing boat ramp, eliminating fill at Cascade Point.	Dock facilities located at Cascade Point and slate Creek Cove.

2.2 OVERVIEW OF PROJECT ALTERNATIVES

This section introduces the four alternatives for the Kensington Gold Project. Section 2.3 provides a detailed discussion of each alternative by project component. Table 2-2 provides a comparison of alternatives based on the number of acres affected and presents the total acreage of disturbance compared to the disturbance on National Forest System lands. Table 2-3 provides a comparison of the size of various

project components among alternatives. Figure 2-1 depicts the overall project location for all alternatives and provides insets that correspond to Figures 2-2 through 2-12. Figure 2-2 shows the facilities that would be constructed under Alternative A. Figure 2-3 depicts the facilities that would be built under Alternative A1. Figures 2-4 through 2-8 show the facilities that would be constructed under Alternative B. Figures 2-4, 2-5, 2-9, 2-10, and 2-11 apply to Alternative C, and Figures 2-4, 2-5, 2-7, 2-8, and 2-12 apply to Alternative D.

Most of the activities conducted under the Kensington Gold Project would occur on federal lands managed by the Forest Service. There are, however, some parcels of private land in the area, which are identified in the figures. The State of Alaska owns the land below the mean high tide line, which is also indicated in the figures. Figure 2-1 further identifies state-selected lands under the National Forest Community Grant provision of the Alaska Statehood Act.

2.2.1 Alternative A: No Action Alternative

The No Action Alternative functions as the baseline against which the effects of other alternatives are compared. In NEPA analyses, the No Action Alternative typically represents a "no build" alternative or maintaining the status quo. Because this is an SEIS, the No Action Alternative reflects a previous action, which in this case is the project identified in the Record of Decision (ROD) issued for the 1997 SEIS. Alternative A corresponds to the 1997 SEIS's Alternative D, which includes underground crushing of ore with aboveground grinding and flotation. Flotation concentrate would be shipped to a processing facility off-site (most likely in Canada or Asia), and

the on-site cyanidation process proposed in 1992 would be eliminated. Employees would be housed on-site and transported to the site by helicopter. Supplies, including fuel, would be delivered to a marine terminal on Comet Beach. Approximately 25 percent of the tailings would be backfilled into the mine. The remaining tailings would be dewatered before being placed in the thy tailings facility (DTF). The DTF would have the design capacity to hold 20 million tons of tailings and would include an engineered berm around each cell of the facility to enhance stability. Road and DTF construction would require the development of sand and gravel and till borrow areas. The production rate would be 4,000 tons of ore per day and 400 tons of waste rock per day. The waste rock would be used in the construction of the DTF.

Table 2-2
Comparison of Alternatives by Area

Disturbance by Alternative (in acres)	Alternative A	Alternative A1	Alternative B	Alternative C	Alternative D
Existing disturbances (roads, facilities)	23 (18.4)	23 (18.4)	55.2 (37.4)	55.2 (37.4)	55.2 (37.4)
Maximum additional disturbance during operations	245 (229.3)	164 (148.3)	140.3 (119.8)	160.3 (139.8)	142.2 (121.7)
Total surface disturbance during operations	268 (247.7)	187 (166.7)	195.5 (157.2)	215.5 (177.2)	197.4 (159.1)

Note: Disturbances on National forest System lands are presented in parentheses.

Table 2-3
Size of Selected Project Components (in acres)

	Alternative A	Alternative A1	Alternative B	Alternative C	Alternative D
Process Area	34.2	34.2	17.2	17.2	17.2
Marine Facilities	4.4	4.4	6	6	6
Explosives Magazine	2.9	2.9	_[a]	_[a]	_[a]
Fuel Storage	0.3	0.3	_[b]	_[b]	_[b]
Access Roads	22.8	22.8	28.9	28.9	28.9
Tailings Facility	113.4	50[c]	86.1[d]	86.1[d]	86.1[d]
Stormwater Detention/Sediment Ponds	7.5	7.5	_[e]	_[e]	_[e]
Laydown Area	0.8	0.8	5	5	5
Borrow Site(s)	54.7	36.6	8.4	8.4	8.4
Topsoil (Growth Media) Stockpile	9.3	9.3	1.6	1.6	1.6
Personnel Camp	5	5	NA	NA	NA
Batch Plant	1.3	1.3	NA	NA	NA
Mine water treatment ponds	6	6	6	6	6
Waste Rock Storage	Temporary	Temporary	36.3	36.3	36.3
Upper Portals	6	6	_[f]	_[f]	_[f]
Diversions and Treatment	_[g]	_[g]	_[e]	8.8	1.9
Inundation (during operations only)	NA	NA	NA	11.2	NA
Total Disturbance	**268.6**	**187.1**	**195.5**	**215.5**	**197.4**

[a] Located underground.

[b] Isotainer storage included in laydown area, process area, and marine facility acreages.

[c] Figure includes 33-acre DTF, 6-acre berm, and 10-acre staging area.

[d] Figure includes pipeline access road and cutoff road.

[e] Figure is included in the process area acreage.

[f] Not required because of Jualin access tunnel.

[g] figure included in DTF acreage.

NA = Not applicable.

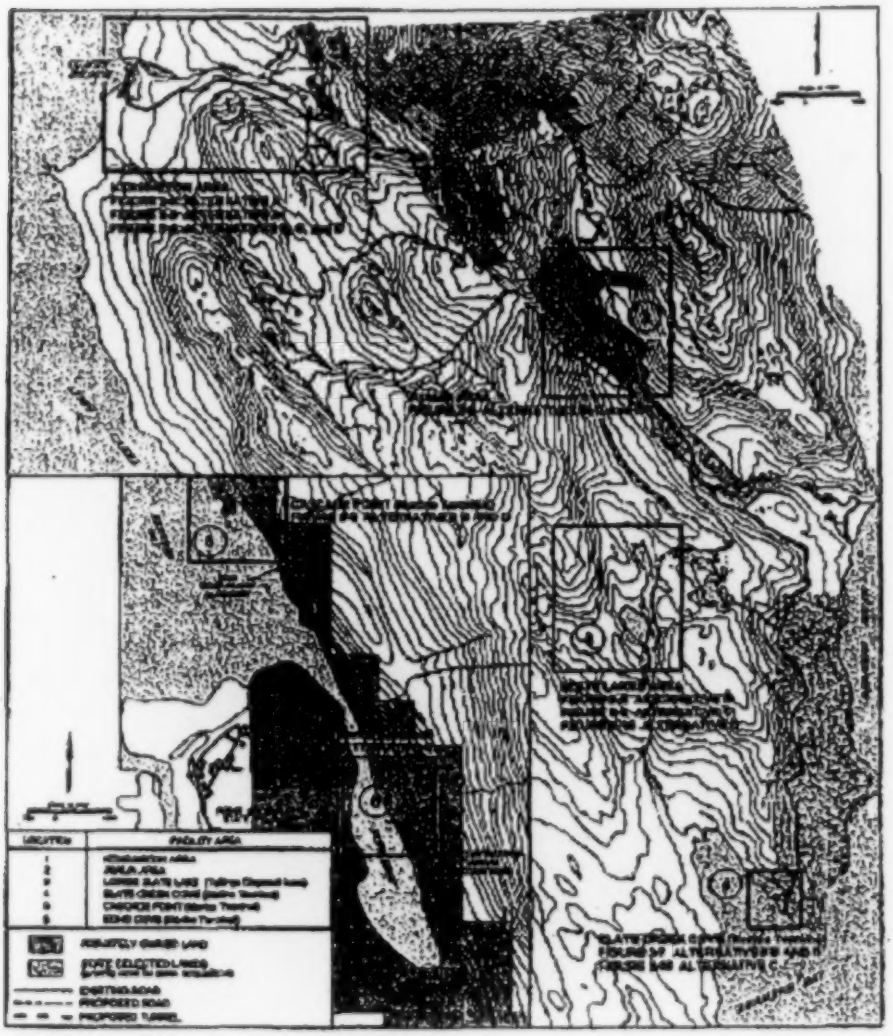


FIGURE 2-1. OVERALL LOCATION OF FACILITIES

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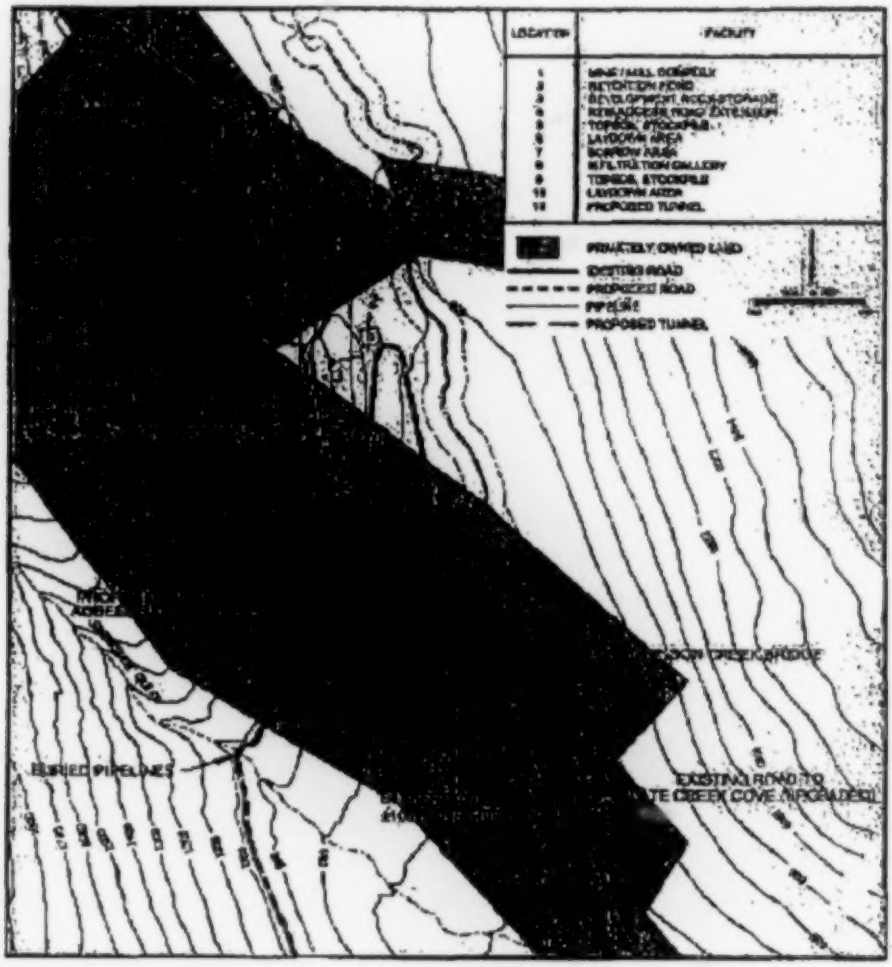

FIGURE 2-6. ALTERNATIVES B, C, AND D, JUALIN PROCESS AREA

2.2.2 Alternative A1: Reduced Mining Rate DTF

Alternative A1 represents one possible development scenario if the No Action Alternative was selected under current economic conditions. It is included to provide a mechanism for comparing all alternatives under a similar development scenario. Because Alternative A represents an approved Plan of Operations, the limited mining scenario under Alter-

native A1 could not be imposed on the company if the No Action Alternative was selected.

Alternative A1 would result in 4.5 million tons of tailings being placed in the DTF, assuming that 40 percent of the tailings would be backfilled. As described under the selected alternative in the 1997 ROD and as Alternative A in this analysis, the DTF would be constructed in three phases, each of which would use a separate cell within the DTF footprint. The size of the DTF under Alternative A1 is assumed to be the same as that proposed for the first cell under Alternative A (40 acres, including 6 acres for the structural berm). The analysis assumes a disturbance footprint of 50 acres during development of the DTF to allow room for staging of the dewatering operations and material stockpiles. This staging would have occurred within the full DTF footprint under Alternative A. The reduced mining rate presented under Alternative A1 would produce very limited amounts of waste rock. Because waste rock would not be available for use in DTF construction under Alternative A1, the impact analysis assumes that the same number of acres of sand and gravel borrow area as that under Alternative A would be required. The analysis also assumes that about half of the coarse and fine till borrow area would need to be developed to support construction of a smaller DTF. Other aspects of Alternative A1, including transportation of employees and materials, would be the same as those described under Alternative A. The life of the operation would be reduced to 10 years following 2 years of construction.

2.2.3 Alternative B: Proposed Action

Alternative B reflects a number of changes to the mine plan associated with the No Action Alternative.

These changes include constructing an underwater TSF within Lower Slate Lake, relocating milling operations to the Johnson Creek drainage, and eliminating the personnel camp. The operation would mine a smaller amount of ore with a higher average gold concentration compared with that proposed under Alternative A. Alternative B would include the development of a tunnel to connect the Kensington and Jualin areas of the mine. Access to the site would be from marine terminals built in Slate Creek Cove and at Cascade Point. A daily crew shuttle boat service would transport employees to and from the project site. The TSF would be sized to accommodate the disposal of 4.5 million tons of tailings. Borrow areas would need to be developed for construction of the TSF dam and roads. The production rate would be approximately 2,000 tons of ore per day. This alternative includes recycling water from the TSF to the mill circuit. Alternative B would require upgrading the 5-mile-long access road, constructing a 3.5-mile pipeline access road, and constructing a 1-mile cutoff road connecting the other two roads.

2.2.4 Alternative C: Dock Location and Design / Diversion

Alternative C would include a dock in Echo Cove, approximately 0.75 mile north of the existing Echo Cove boat ramp. Mine workers would use this dock to reach the crew shuttle that would deliver them to the dock at Slate Creek Cove. The landing craft ramp at the Slate Creek Cove marine terminal would be eliminated, minimizing the amount of fill in the intertidal areas. Alternative C would not include recycling water from the TSF and the mill circuit. The "no recycle" aspect was included in Alternative C

at the request of the operator to address the possibility that the operator might be granted an exemption from the regulatory requirement at 40 CFR Part 440 that process water must be recycled. This alternative would also include diversion channels to direct the flow from Mid-Lake East Fork Slate Creek and overland runoff from undisturbed areas around the TSF. The diversions would require a dam on Upper Slate Lake to maintain water levels in the diversion sufficient to reach the spillway at the TSF dam. The diversion would discharge to a spillway at the top of the TSF dam. The purpose of the diversion, would be to minimize the volume of fresh water in contact with the tailings. The remaining project components, including the production rate of 2,000 tons per day of ore and the access tunnel, would be the same as those under Alternative B.

2.2.5 Alternative D: TSF Water Treatment and Pipeline Diversion

Alternative D includes a modified TSF design. A dam would be constructed in Mid-Lake East Fork Slate Creek, and it would gravity-feed a diversion pipeline. TSF water would be pumped to a reverse osmosis treatment system. The treatment plant effluent would discharge into the diversion pipeline, which would flow to East Fork Slate Creek below the TSF dam. Once tailings disposal was complete, the tailings would be capped with native material unless the operator can demonstrate that uncovered tailings would not cause toxicity throughout Lower Slate Lake after closure. The remaining components would be same as those of Alternative B.

2.3 PROJECT COMPONENTS STUDIED IN DETAIL

2.3.1 Project Location / Duration

Figure 2-1 shows the location of project facilities, which would be built on National Forest System lands as well as private land (dark shading). Under Alternative A, the facilities would be contained within watersheds draining to Lynn Canal. The process area would be near the Kensington 850-foot portal and would consist of the mill, warehouse buildings, maintenance shop, administrative offices, and laboratory. The personnel camp would be near the wastewater treatment plant, downslope of the process area. Under Alternatives B, C, and D, portions of the operation (waste rock disposal and wastewater treatment of the mine drainage) would remain within the Sherman Creek drainage; however, facilities would also be built in the Johnson Creek and Slate Creek drainages, within the Bailers Bay watershed. Under Alternatives B, C, and D, the facilities mentioned above would be moved to an area above the historic Jualin Mine (Figure 2-5) consisting mostly of patented mining claims (private land). The personnel camp would be eliminated.

Under Alternative A, the active life of the project would be at least 12 years based on the existing reserve, following a 2-year construction period. Alternative A1 would have an active life of 10 years following a 2-year construction period. Mining operations lasting 10 years are projected under Alternatives B, C, and D, following an 18-month construction period.

2.3.2 Mining Methods

The proposed mining methods are similar to those presented in the 1997 Approved Plan of Operations. The following discussion provides a brief summary of mining methods based on details provided in the 1992 FEIS. The reader is referred to pages 2-5 through 2-7 of that document for additional details.

Under Alternatives A and Al, the ore body would be accessed by the existing tunnel at the Kensington 850 portal. Under Alternatives B, C, and D, the Jualin tunnel would be used as the primary access for workers and materials into the mine, as well as ore haulage between the mine and mill. The Jualin tunnel would be 18 feet wide by 15 feet high to accommodate 40-ton haul trucks. On the Jualin side, the portal would be near the mill at an elevation of 1,050 feet. From the portal, it would slope downward at a grade of 1.5 percent for 5,000 feet toward the existing Kensington tunnel, which it would intersect at an elevation of 932 feet. The tunnel would be driven from both sides to reduce the duration of the preproduction development period and to eliminate the need for a ventilation raise to the surface. The estimated schedule for completing the tunnel is about 150 days.

The Kensington ore body consists of a dense pattern of quartz veins and veinlets that extend from the surface to a depth of approximately 3,000 feet. The ore zone averages approximately 60 feet wide but ranges in width from 22 feet to more than 165 feet. The ore body is irregular in shape and erratic in the distribution of gold content. Coeur selected a mining method called the long-hole, open-stope technique on the basis of a number of factors, such as the spatial

and physical characteristics of the deposit, economics, and environmental considerations.

The long-hole, open-stope technique is employed in situations where ore occurs in wide and steeply dipping vein deposits. Mining would progress throughout the ore body as dictated by mine design, stope size, backfilling sequence, and other key elements that maximize extraction of the mineral resource. The long-hole, open-stope method allows for flexibility in handling irregular ore body widths and allows efficient removal of ore. It also allows safe working conditions while using a minimal workforce. Figures 2-13 and 2-14 depict the extent of the mine workings under Alternatives A1 , B, C, and D in relation to the ground surface and surface water drainages, respectively.

The operation under all the alternatives would mine the Kensington ore body. Alternative A proposes to process ore at a rate of 4,000 tons per day (tpd) and produce approximately 26 million tons of tailings over the life of the mine. The DTF would be sized to hold a maximum of 20 million tons, and 25 percent of the tailings would be backfilled. Under Alternatives A1, B, C, and D, a smaller portion of the same ore body would be mined at a rate of 2,000 tpd. The 2,000-tpd operation would target smaller quantities of higher-grade ore (ore with a higher gold content) than the operation proposed under Alternative A. Operations under Alternative A1, B, C, or D would produce a total of 7.5 million tons of tailings over the life of the mine: 4.5 million tons (60 percent) would be disposed of in the TSF (or the DTF in the case of Alternative A1), and 3 million tons (40 percent) would be backfilled.

2.3.3 Waste Rock Disposal

Waste rock is material encountered during the mining process that has a gold content less than that economically recoverable. During operations, waste rock would be hauled to the surface for storage, use, or disposal.

Under Alternative A, waste rock would be used as foundation, drainage, and berm material in construction of the DTF. A 15-acre temporary stockpile would be located near the mine opening for the first 3 to 4 years while the DTF was being developed. Once the DTF became active, the demand for waste rock would essentially equal production; that is, all waste rock would eventually be used in the DTF. Section 2.3.3 of the 1997 SEIS provides a more detailed discussion of waste rock management under Alternative A. Very little waste rock would be produced under Alternative A1.

Under Alternatives B, C, and D, most of the waste rock would be generated in the process of developing the access tunnel between the Kensington and Jualin portals. This tunnel would not be developed under Alternative A or A1. The waste rock would be hauled by truck to a 31.5-acre permanent disposal site near the Kensington 850-foot portal. There would also be capacity to store approximately 500,000 tons of waste rock on 4.8 acres in the vicinity of the process area at Jualin. Under all alternatives, waste rock could also be placed underground as part of the backfill process.

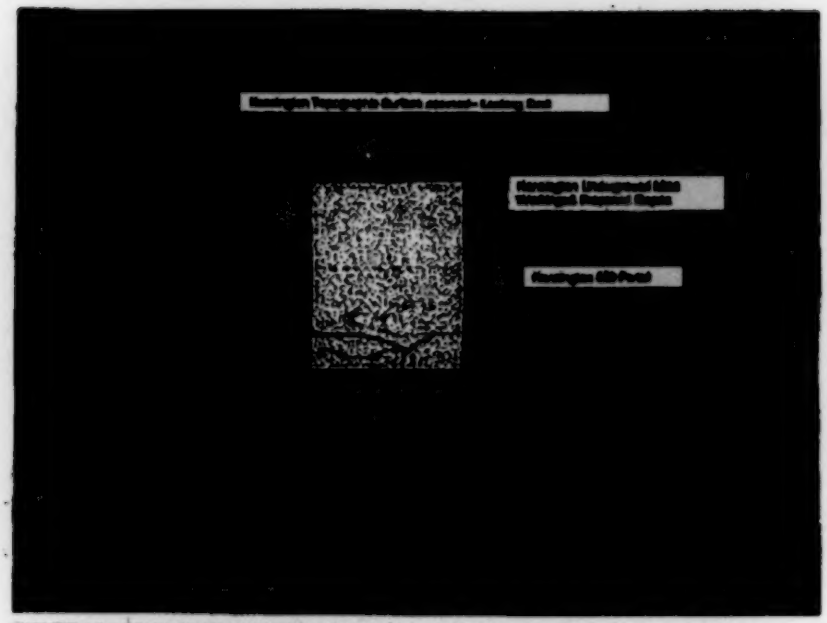

FIGURE 2-44. UNDERGROUND MINE WORKINGS UNDER ALTERNATIVES A1, B, C, AND D IN RELATION TO SURFACE WATER DRAINAGES

2.3.4 Ore Processing

Ore processing refers to the methods by which gold is separated from the surrounding material. The steps in ore processing would be nearly the same under all alternatives; the only difference would be the location of the processing facilities. Processing steps include crushing, grinding, flotation, thickening, and filtration. Under Alternatives A and A1, crushing would take place underground and all the other steps would be conducted in buildings. Under Alternatives B, C, and D, all steps would be done in buildings. Table 2-4 summarizes the chemicals and materials used in the milling process under each alternative.

Table 2-4
Chemical and Material Use

Milling Process	Reagent or Material	Container (Shipping and Storage	Approximate Daily Use (tons)	
			Alternative A	Alternatives A1, B, C, and D
Grinding	Steel balls	10-ton steel bins	5.6	4.5
Flotation	Potassium amyl xanthate	50-gallon drum	1	0.5
	MIBC (frother)	50-gallon drum	0.4	0.2
	Flocculant	1-ton Flo-bin	0.2	0.1
	Polymer	50-gallon drum	0.02	0.01
	Surfactant	50-gallon drum	0.04	0.02
	Scale inhibitor	50-gallon drum	0.1	0.05
	Lime*	1,000-lb bags	2	1

* Lime is also used in concentrate thickening.

The mill would be located at the Kensington process area under Alternatives A and Al and at the Malin process area under Alternatives B, C, and D. In each case, ore would be hauled from the active mining area and dumped down an ore chute. The material would then be sent through the primary crusher, which would reduce the size of the ore to less than 6 inches. The crushed ore would then be hauled by truck to the coarse ore stockpile at either the Kensington side (Alternatives A and A1) or Jualin side (Alternatives B, C, and D) of the operation. There, the ore would be fed into a hopper with a vibrating feeder and then onto a belt that would discharge into a semiautogenous grinding (SAG) mill.

The SAG mill would be set up in a closed circuit with a horizontal vibrating screen and a ball mill. Oversized material would be fed back into the SAG mill, while undersized material (minus 100 mesh) would be directed to hydrocyclones. Hydrocyclones use centrifugal force to separate coarse material from fine material. The heavy material (underflow) from the cyclones would be directed to a gravity concentrator used to recover coarse gold. Lighter materials from the cyclones would be fed back to the cyclone circuits, eventually overflowing from the cyclones to a conditioning tank feeding the flotation circuit.

The flotation process would involve separating the gold from the barren material in a froth flotation. A slurry would be fed from the cyclones to the conditioning tank, where conditioners (e.g., potassium amyl xanthate) and frothing agents would be added. These materials would cause the sulfide and telluride minerals (both gold-bearing) in the slurry to attach to air bubbles once air was pumped through the system. The bubbles containing the mineralized portion of the slurry, including the gold, would form a froth on top of the flotation tank. The gold-bearing froth would then be skimmed off and collected. This "concentrate" would flow through additional flotation tanks to further concentrate the gold. The flotation process would separate approximately 93 to 96 percent of the non-gold material from the ore fed into the system, leaving 160 to 280 tons (under Alternative A) or 80 to 140 tons (under Alternatives A1, B, C, and D) of flotation concentrate per day. Most of the chemicals added to the system would stay in the flotation tanks or be removed with the flotation concentrate as opposed to being discharged with the tailings. Most of the metals associated with the ore body would be removed from the system with the gold concentrate.

Following the final flotation, the concentrate would be dewatered before being placed into specialized 8-foot by 8-foot by 20-foot sealed marine transport containers for shipment to an existing, off-site processing facility outside Southeast Alaska. Under Alternative A the average production would be approximately 1,400 tons (40 containers) of concentrate per week. The production level would average approximately 700 tons (20 containers) of concentrate per week under Alternatives A1, B, C, and D.

2.3.5 Tailings Disposal

Tailings are the material that remains in the flotation tanks once the gold-bearing material has been removed. This Final SEIS evaluates two methods of tailings disposal. Under Alternatives A and A1, tailings would be placed in the DTF. Alternatives B, C, and D would employ wet (underwater or subaqueous) tailings disposal methods in the TSF constructed in Lower Slate Lake. Under all the alternatives, the operator would backfill some of the tailings to permit the maximum extraction of the resource and provide structural stability within the mine. Under Alternative A, the operator would backfill at least 25 percent of the tailings generated. Under Alternatives A1 , B, C, and D, the operator proposes to, backfill at least 40 percent of the tailings generated over the life of the operation.

Dry Tailings Disposal

The following discussion is taken from Section 2.3.6 (pages 2-20 through 2-22) of the 1997 SEIS. Additional detail on the DTF can be found in that document. Under Alternatives A and A1, the DTF would be constructed using methods similar to the construction of landfills. The slurry would be thickened to approximately 55 percent solids. The thickened slurry would be moved from the mill to the DTF through an 8,000-foot, gravity-fed pipeline. The pipeline would be built within the footprint of the haul road for most of its length. The pipeline would be approximately 14 inches in diameter with a 20-inch casing for spill containment. At the DTF the tailings would be dewatered, using plate filters (or the design equivalent), to a moisture content of 5 to 18 percent. The filter cake would then be loaded into trucks and placed in the DTF.

The DTF would be constructed in a series of three stages or cells. Before placement of the first lift of each cell, a series of foundation drains would be installed to form the base. The drains would be laid out in a herringbone pattern and consist of gravel wrapped in geotextile material. A minimum of 2 feet of waste rock or development rock would be placed over the drains. Each cell would consist of five to seven lifts, each 28 feet high. Tailings would be placed (unconsolidated) into the 28-foot lifts followed by 1 foot of compacted, low-permeability fine till and 1 foot of waste rock to provide a cover and working surface. Stockpiles of waste rock to be used in DTF construction would be placed within the footprint of the next cell. The final cover for the facility would consist of 6 to 8 feet of coarse and fine till. The underlying fine till layer would serve as a capillary break, and the overlying coarse till would promote infiltration and drainage. Growth media would be placed on the coarse till to support revegetation.

To ensure that tailings placed into the DTF did not contain excess moisture, there would be no temporary storage at the process area or the dewatering area. Tailings would be placed directly into the DTF or backfilled. The operation would generally expose less than 5 acres of tailings to direct precipitation at any one time (before concurrent covering and revegetation), as illustrated in Figure 2-15.

An engineered structural berm would be constructed around the north, south, and west sides of each cell to increase the stability of the facility. The berm would be constructed of waste rock, compacted tailings, or other suitable material. The berm would extend to a height of approximately 100 feet along the west slope and 50 feet along the north and south

slopes. Under Alternative A, the DTF, including the berm, would ultimately cover 113 acres and have a capacity of 20 million tons of tailings. Under Alternative A1, the DTF would cover approximately 40 acres and be able to store 4.5 million tons of tailings.

Subaqueous Tailings Disposal

Under Alternatives B, C, and D, tailings would flow by gravity as a slurry from the mill facility located on private land near the Jualin Mine portal to the TSF at Lower Slate Lake through a 3.5-mile pipeline (Figures 2-5 and 2-6). The pipeline would be double-walled, high-density polyethylene (HDPE), approximately 6 inches in diameter. Flow sensors with automatic shutdown mechanisms would be used to detect any blockages or breaks in the system.

Before the slurry left the mill, a polymer and flocculant would be added to agglomerate the small particles and enhance settling once the tailings were deposited into the TSF. The polymers and flocculants are not toxic and would have no effect on water quality beyond their capability to improve the efficiency of settling out fine material. The tailings slurry would be discharged into the TSF through perforations in a portion of the tailings delivery pipeline submerged in the TSF.

A portion of the perforated segment of the pipeline would always be above the bottom of the TSF, allowing the tailings to flow freely from the pipe. The perforations would be very large in comparison to the size of the tailings particles to prevent the tailings from clogging the pipeline. Valves would be placed in the delivery pipeline to allow for maintenance or relocation of the tailings discharge point (perforated pipe). The tailings pipeline would be moved periodically to ensure equal distribution of the tailings.

Under Alternative B, water from the slurry transport of tailings and natural inflow from the drainage basin would maintain a relatively consistent lake volume and thus provide water cover for the tailings. The tailings would be deposited to a final elevation of 704 feet with a constant cover of at least 9 feet of water. Figures 2-16 and 2-17 provide an overview of biological activity in Lower Slate Lake before and after mining operations. The maximum depth of the tailings at closure would be approximately 120 feet. The operational details of the facility at the initial dam construction stage (705 feet) have yet to be determined. Water would be recycled from the TSF for reuse in the process facilities at an average rate of 100 gallons per minute (gpm).

Under Alternative C, all natural inflows from the channel between the two lakes (Mid-Lake East Fork Slate Creek; see Figure 3-3) and the drainage areas surrounding the TSF would be diverted around the TSF. In this case, natural flows would be captured in diversion ditches, carried around the north and east shores of the TSF, and discharged to a drop structure constructed at the TSF dam spillway. Water from the TSF would not be recycled under Alternative C.

Under Alternative B, a drop-structure spillway would be installed at the east abutment of the dam to direct discharge from the TSF to East Fork Slate Creek. An energy dissipater at the bottom of the spillway would allow the water to flow into East Fork Slate Creek without affecting the downstream velocity in the creek. Operationally, water would be pumped from a clear portion of the pond, away from the tailings discharge, to the spillway inlet for discharge. The operator would manage the TSF so that the water is maintained at a steady level. This ap-

proach would maintain flow-through conditions so that releases from the TSF would be roughly equivalent to the natural inflow to the lake from natural sources. Under Alternative C, the discharge from the TSF would be pumped to the diversion channel, where it would combine with the natural flows in the diversion channel before flowing into East Fork Slate Creek below the embankment. Upon completion of mining operations, the lake ecosystem would be reestablished at its new level and flows would passively discharge through the permanent embankment spillway.

* * * * * * *

2.3.6 TSF Dam Construction

The TSF would be formed in part by the natural lake basin at Lower Slate Lake and a dam constructed at the outlet of the lake. The dam would be a concrete-faced rockfill dam constructed in two phases. During operations, the dam of the TSF would be 90 feet tall and approximately 500 feet long. The TSF would be sized to accommodate 4.5 million tons of tailings. Figure 2-19 shows the TSF dam. The phased approach to constructing the dam would allow tailings disposal to begin once the first stage of the dam was completed. The second stage would be built while mining operations and tailings disposal were active, likely 4 to 5 years into the process.

* * * * * * *

4.9.3 Effects Common to Alternatives B, C, and D

Under Alternatives B, C, and D, mine drainage would be treated the same as under Alternative A. However, most operations would occur within the Johnson Creek drainage (access roads and process

area) and the Slate Creek drainage (access roads and the TSF). The same indicators as described under Alternatives A and Al were used to compare the potential impacts.

Integrity of Freshwater Habitat

Alternatives B, C, and D would require a stormwater diversion channel above the Jualin Mine portal and process area bench and would discharge to Johnson Creek. Stormwater discharged from the diversion would not affect fish or other aquatic organisms.

Alternatives B, C, and D include tailings disposal in Lower Slate Lake through a slurry pipeline from the mill. For the purposes of this analysis, it is expected that all fish and most other aquatic life (such as macroinvertebrates, periphyton, and zooplankton) in Lower Slate Lake would be lost during operations as a result of this action. Some individuals might survive, but marginal food sources and the lack of suitable habitat as the lake elevation rises appear to be the major limiting factors.

Two species of fish are present in Lower Slate Lake: three-spine stickleback (a forage fish) and Dolly Varden char (a sport fish). Estimates of mortality based on the survey completed in 2001 indicate approximately 1,000 Dolly Varden char could be lost because of the tailings disposal in Lower Slate Lake (Kline, 2003a). The Dolly Varden char in Lower Slate Lake appear to be small and exhibit slow growth, according to a comparison of the literature on other Dolly Varden char in Southeast Alaska lakes (Kline, 2003a). As discussed in Section 3.9.2, the number of three-spine sticklebacks in Lower Slate Lake has not been defined, although it is likely greater than the number of Dolly Varden char. The entire population

of three-spine sticklebacks could be lost during operations.

Placement of tailings in Lower Slate Lake would raise the lake level to the point that most of both channels of Mid-Lake East Fork Slate Creek would become inundated. Kline (2003c) indicated that there is no evidence that Lower Slate Lake Dolly Varden char spawn in Mid-Lake East Fork Slate Creek. Dolly Varden char have been captured in this system in June, August, September, and October. In the accessible reaches of Mid-Lake East Fork Slate Creek, an average of seven Dolly Varden char were captured in each sampling effort. Of the fish captured in this system, 90 percent have measured less than 5.5 inches in total length. These fish represent the lower 50 percent of the Dolly Varden char hi the Slate Creek system and are thus unlikely to include sexually mature fish. This lack of evidence of stream spawning is not sufficient to rule out the possibility that some stream spawning occurs; however, in this case, it appears very limited.

Mortality of macroinvertebrates and other aquatic organisms would also occur in close proximity to the deposited tailings. As the water level in the TSF rose, lakeshore vegetation would become inundated and provide new microhabitat and detritus for colonizing macroinvertebrates. Generally, macroinvertebrate species adapted to highly variable stream environments are better able to tolerate change than those in more stable lake and pond environments (Mackie, 1998). Impacts on species abundance and diversity resulting from catastrophic substrate loss or degradation are well documented. Reports of heavily disturbed streams indicate that macroinvertebrate recovery can occur within time frames ranging

from months to a few years (Appendix C; Hill, 1975; Gore, 1985; Thomas, 1985), though responses can vary for individual species (Minshall, 1982).

Figures 2-16 and 2-17 provide overviews of Lower Slate Lake before operations and after closure. As discussed below under Sedimentation and in Appendix C, toxicity tests show that the tailings might not provide suitable habitat for macroinvertebrates. Over the long term, as natural materials redeposit throughout the lake, the larger shallow/productive areas should increase the available habitat (and corresponding fish and macroinvertebrate populations). In the proposed reclamation plan, after mine closure the lake would have at least an equivalent area of plant and shallow water macroinvertebrate habitat that is not covered by tailings. It is therefore assumed that post-closure habitat should be adequate to support a macroinvertebrate population at least comparable to the pre-mining population.

The work completed to date demonstrates that the TSF can be restored to at least equivalent habitat and fish populations after closure. The operational monitoring described in Section 2 would be used to further refine and optimize the reclamation plan. These data would be reviewed by the Forest Service and ADNR, which would approve and oversee implementation of the final reclamation plan.. As required by the ADNR Title 41 permit, downstream fish passage would have to be provided at closure from Upper Slate Lake through Lower Slate Creek to East Fork Slate Creek below the lakes. Upstream fish passage would not be restored from East Fork Slate Creek below Lower Slate Lake to Lower Slate Lake.

The existing Jualin access road would be maintained as the primary access to the mine under Alternatives B, C, and D. The road would be upgraded as needed to suit construction and operational requirements and extended from Jualin to the proposed mine portal using appropriate Forest Service BMPs. This road has two stream crossings over Johnson Creek. Existing bridges would be upgraded. Construction would be consistent with Forest Service standards and guidelines (TRAN214), including the use of erosion control and stabilization measures. The installation or improvement of the bridges would also be done under ADNR Title 41 permits that would address impacts on fish habitat.

* * * * * * *

Sedimentation

Sediment resulting from road construction and improvement and, to a lesser extent, from mine operation could be carried into the Slate and Johnson Creek drainages. Impacts on the stream systems from these relatively minor amounts of sediment from construction-related activities would be similar to those described under Alternative A.

Under Alternatives B, C, and D tailings would be deposited subaqueously into the TSF. ASci Corporation (2000a, 2000b) conducted habitability tests using several amphipods on shallow and deep Lower Slate Lake sediments, a control lake sediment, and sediment composed of Kensington Mine tailings. ASci Corporation (2000a, 2000b) conducted tests using *Hyalella azteca* and *Chironomus tentans* in the various sediments to determine effects on survival, growth, emergence, and egg production. Results of the habitability tests on *Hyalella azteca* indicated

the control lake sediments and Lower Slate Lake sediments (both shallow and deep) supported acceptable growth as defined by weight and length. The tailings sediment sample caused a statistically significant reduction in the survival of *Hyalella azteca* when compared with the control lake sediments and Lower Slate Lake shallow and deep sediments. Specifically, the survival of *Hyalella azteca* was as follows:

- 83 ± 13 percent in control lake sediments
- 76 ± 22 percent in Lower Slate Lake deep sediments
- 62 ± 28 percent in Lower Slate Lake shallow sediments
- 5 ± 8 percent in tailings sediments

The suggested USEPA minimum survival rate of *Hyalella azteca* for a 28-day sediment exposure is 80 percent. The effect of the tailings sample on *Hyalella azteca* reproduction could not be determined because of low survival in the tailings sample after 28 days.

Results of the habitability tests on *Chironomus tentans* indicated that the control lake sediments, Lower Slate Lake sediments, and tailings supported acceptable 20-day growth. Samples from shallow Lower Slate Lake and deep Lower Slate Lake and tailings samples supported emergence rates of 85 percent, 53 percent, and 43 percent, respectively, showing a statistically significant reduced emergence rate of *Chironomus tentans* when compared with the control lake sample and shallow Lower Slate Lake sediments. USEPA recommends a minimum endpoint of 50 percent for emergence.

These results indicate that mortality of and reproductive effects on *Hyalella azteca* and *Chironomus*

tentans that attempted to recolonize the deposited tailings would occur as a result of subaqueous tailings deposition in the TSF. It is likely that similar effects on other macroinvertebrates and aquatic insects would occur. Appendix C shows that the sediment is not toxic to fish populations. However, the reduced number of macroinvertebrate and aquatic insect forage species might indirectly affect post-deposition fisheries populations. As discussed previously, it is assumed that the majority of the fish and other aquatic life in Lower Slate Lake would be lost during operations as a result of tailings disposal. Some individuals might survive, but limited food sources and the lack of suitable habitat as the lake elevation rose appear to be the major limiting factors.

At closure, the shallow aquatic habitat that is not covered by tailings should support near-term restoration of the macroinvertebrate and fish populations in the lake. Modeling shows that the tailings would not generally resuspend and redeposit over the natural sediment areas (Appendix C).

Finally, some uncertainty is associated with these analyses, including the tailings toxicity test results. Reasonable "worst-case" assumptions, however, have been made here and in Appendix C in presuming that all aquatic life would be lost in the TSF during operations and that the tailings would not support macroinvertebrates after closure (Tetra Tech, 2003b). As additional test and operational data became available, the mine operator would modify tailing deposition procedures and the reclamation plan to maximize opportunities for improving aquatic resources in the lake.

* * * * * * *

Functional Losses. The predominant wetland types that would be affected by Alternatives B, C, and D are forested and emergent wetlands. Forested wetlands at the outlet of Lower Slate Lake received high functional ratings for wildlife habitat, carbon/detrital export, and fish habitat. They received moderate ratings for sediment/shoreline stabilization and nutrient cycling. Emergent wetlands within the vicinity of the proposed process area received moderate ratings for all functions except groundwater interchange (low). Wetlands in the vicinity of the Slate lakes and Spectacle Lake form a large forest and emergent wetland 'system. This area would experience approximately 23 acres of impacts under Alternative B, almost 35 acres under Alternative C, and 25 acres under Alternative D. The forested/emergent system provides high levels of wildlife habitat and moderate values for fish habitat, nutrient cycling, carbon/detrital export and sediment/toxicant retention. Of the additional affected acres under Alternative C, the inundation of 11 acres around Upper Slate Lake would occur only during the life of the project. These wetlands would be expected to reestablish once the water levels receded. Construction and operation of the TSF would result in the permanent loss of 23 acres (13.5 acres of forested wetlands and 9 acres of emergent wetlands).

The direct loss of function would result from the placement of fill, burial by tailings, or inundation. With the exception of the areas inundated by the TSF or buried by the dam, impacts on forested wetlands would remain in place through the duration of operations and would begin recovery with reclamation. The loss of the habitat function would not occur simply as result of construction and operation of the project because the presence of humans and equip-

ment would likely affect the habitat values well beyond the direct impacts on, forested wetlands. The loss of hydrologic functions of the DTF began. Under Alternative A, some of the palustrine forested and scrub-shrub wetlands in other portions of the project area would become emergent or aquatic bed wetlands (borrow areas), while others would be encouraged to return to their pre-mining form following reclamation. Alternative A1 would have proportionally fewer impacts on wetlands in the terrace area because of the reduced footprint of the DTF.

By comparison, Alternatives B, C, and D would affect substantially fewer acres of wetlands but would affect a greater number of wetland types, including palustrine emergent, palustrine aquatic bed (Upper Slate Lake), and lacustrine (Lower Slate Lake). Lower Slate Lake provides high values for fish habitat, high values for wildlife habitat, and moderate values for nutrient cycling and carbon export. Upper and Lower Slate lakes provide aquatic habitat for the Dolly Varden char, three-spine sticklebacks, and benthic organisms that inhabit the lake. In addition, the lake margins support the wide variety of wildlife in the area, including moose and Vancouver Canada geese. Not all functions provided by the lakes would be lost during construction and operations; however, the value for fish habitat is assumed to be lost for the duration of operations and the value in terms of wildlife habitat would be reduced at a minimum. Nutrient cycling and production export values would also be lost during operations. The diversity in form provided by the palustrine emergent wetlands provides moderate wildlife habitat values and sediment retention, as well as high values for flood flow alteration. The forested wetlands would provide values

similar to those associated with Alternatives A and A1. Impacts on the emergent, forested, and shrub-scrub wetlands would remain at least through the duration of operations; the extent of recovery following reclamation would depend to a great extent on the extent of fill removal and reestablishment of wetland hydrology.

Alternative C would also affect Upper Slate Lake (palustrine aquatic bed) during operations. The effect of losing or reducing the functions of both lakes simultaneously during operations would be substantially greater than the effects on Lower Slate Lake alone under Alternatives B and D, including the loss of nutrient cycling, and production export and loss/reduction in value of habitat for fish (see Section 4.10) and wildlife (see Section 4.11). Upper Slate Lake and the wetlands surrounding it would recover from the impacts from inundation after reclamation; however, the recovery of emergent and submergent wetland vegetation along the margins of the lake would take years, with herbaceous vegetation recovering first, followed by shrubs and trees.

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Appendix C

Ecological Risk Assessment of Aqueous Tailings Disposal at the Kensington Gold Mine

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4.3.3 pH

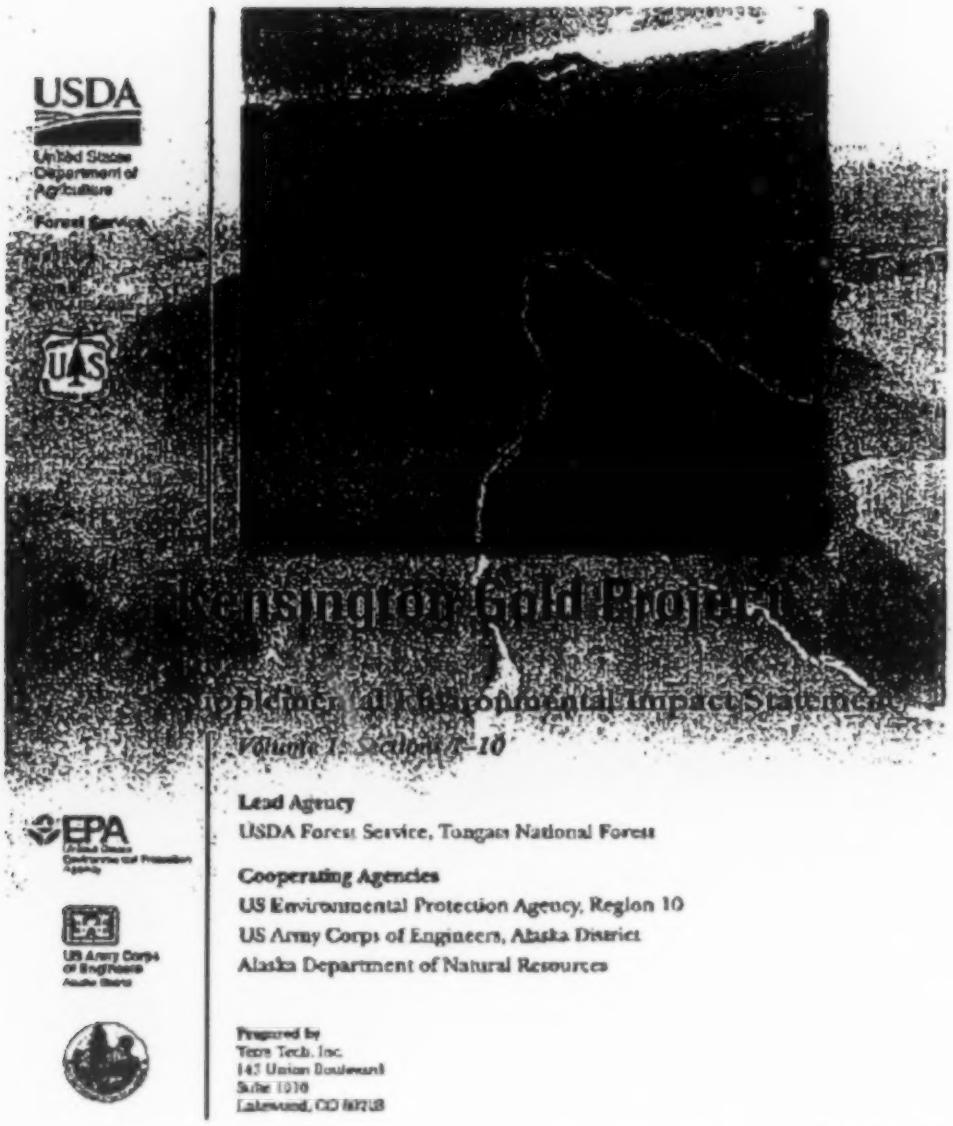
Only direct exposure of aquatic receptors to water is considered an issue for pH in the ERA. In general, the scientific literature on pH is concerned with low-pH conditions rather than high-pH conditions. As a result of the milling process, the tailings decant wa-

ter has high pH levels (Table 3.1). The Gold Book (USEPA, 1986) lists a pH range of 6.5 to 9.0 for aquatic life, though there is no support provided for the upper value of 9.0. McKean and Nagpal (1991) report that a high pH (>9.5) can disrupt ammonia excretion across the gill epithelium and that a pH of more than 10.2 results in salmonid mortality.

4.3.3.1 Worst-Case Water

The decant water has a pH of approximately 10, which is above the protective concentration pH range of approximately 6-9 for aquatic life. Although a pH of 10 would likely pose a risk to aquatic biota in the TSF, elevated pH levels are expected to occur only in the immediate vicinity of the tailings pipe outfall and perhaps in the pore water of small spatial areas around the outfall. The LSL volume of at least 1.4 x 10^8 gallons would be orders of magnitude greater than the projected daily tailings input of 2.1 x 10^5 gallons per day (148 gallons per minute [gpm]).

APPENDIX J



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Record of Decision

USDA FOREST SERVICE

Kensington Gold Project

Juneau Ranger District

Tongass National Forest

Decision to be made

This Record of Decision documents my selection of an alternative that will be used to amend the 1997 Plan of Operations for the Kensington Gold Project. My decision is based on the analysis and evaluations in the 2004 Final Supplemental Environmental Impact Statement (FSEIS) as well as information incorporated by reference from the 1997 FSEIS and ROD and the 1992 FEIS and ROD.

While the 2004 FSEIS considers and discloses all direct, indirect and cumulative impacts related to this project, regardless of land ownership or jurisdiction, my decision addresses only those project components subject to my authority over National Forest System lands. Other Federal and State agencies and the City and Borough of Juneau have authority to issue specific permits on National Forest System lands and elsewhere. In particular, both the Environmental Protection Agency and the U.S. Army Corps of Engineers have yet to exercise their permitting authority over this project and have indicated their intent to issue separate Records of Decision based on this FSEIS. The State of Alaska will also rely on much of this analysis to approve activities on state lands and issue applicable permits. Implementation of my deci-

sion to select an alternative is subject to the completion of those necessary permit processes by the other federal, state, and local authorities.

As part of this decision I will also consider recommendations from an interagency team to modify three small Old Growth Habitat reserves located in the project area.

Background

The Kensington Gold Project is an underground gold mine located approximately 45 miles north-northwest of Juneau, Alaska. The recent history of the Kensington Gold Project began in 1990 when the Kensington Venture (a joint venture between Coeur Alaska, Inc. [Coeur] and Echo Bay Exploration) submitted plans to the Forest Service to develop the Kensington mine. The Forest Service completed the *Kensington Gold Project Final Environmental Impact Statement* (1992 FEIS) and Record of Decision (ROD) in 1992 to consider and disclose environmental impacts that could arise from the project. Alternative F, Water Treatment – Option l was selected as the basis for a plan of operations which was subsequently approved by the Forest Service in July 1992. Alternative F consisted of underground mining, ore processing using cyanide vat leaching, tailings impoundment in Sherman Creek, marine discharge of process wastewater and various support facilities including liquefied petroleum gas for power generation.

In 1995, prior to obtaining all necessary permits, the joint venture was dissolved and Coeur became the sole stakeholder in the property. Coeur submitted an Amended Plan of Operations to the Forest Service in September 1995.

In June 1996 Coeur revised the 1995 Amended Plan of Operations in response to issues raised during scoping and at meetings with state and federal agencies. The 1996 Amended Plan of Operations was analyzed in the *Kensington Gold Project Final Supplemental Environmental Impact Statement* (1997 SEIS) and a ROD signed in August 1997 in which Alternative D (the No Action Alternative in the current SEIS) was selected. Major project changes approved as part of Alternative D in the 1997 decision included off-site shipment of concentrate rather than on-site cyanide leaching, elimination of the slurry disposal dam in Sherman Creek in favor of a dry tailings disposal facility and use of diesel fuel rather than liquefied petroleum gas for power generation. The Forest Service approved an amended plan of operations, consistent with the selected alternative, on May 28, 1998. Coeur obtained all permits necessary for construction from federal, state, and local authorities.

In 2001 Coeur submitted an amendment to the approved 1997 Plan of Operations for the stated purpose of improving efficiency and reducing the extent of surface disturbance of the approved project. The amended plan proposes a number of changes to the 1997 approved plan, including changing the location of the processing facilities from National Forest System lands in the Sherman Creek drainage to private lands in the Johnson Creek drainage near the historic Jualin Mine workings, tailings disposal in Lower Slate Lake, an access tunnel from the mill to the Kensington claims and a daily commute of workers via shuttle boat rather than on-site housing with helicopter access. The operation would also mine a smaller portion of the ore body containing a higher average gold concentration than proposed under pre-

vious plans. The amended plan calls for the construction of two marine terminals on state tidelands; one at Slate Creek Cove and one at Cascade Point, adjacent to lands owned by Goldbelt Incorporated (Goldbelt), an Alaska Native corporation. Goldbelt would own and operate the Cascade Point dock as well as the ferry service between the two marine facilities. See Chapters 1 and 2 of the FSEIS for a more detailed description of the proposed action and alternatives.

The Forest Service directed the preparation of this SEIS using a third-party contractor, Tetra Tech, Inc. The U.S. Environmental Protection Agency (USEPA), U.S. Army Corps of Engineers (USACE), and Alaska Department of Natural Resources (ADNR) participated as cooperating agencies with the Forest Service in preparing the SEIS.

The current SEIS was developed to evaluate proposed changes to the approved plan of operations which could effect National Forest System, State of Alaska, Goldbelt Native Corporation and private lands. Approval for components not on NFS lands will be accomplished through other state and federal agencies with jurisdiction. This SEIS is intended to supplement the 1997 SEIS and 1992 FEIS. According to requirements in the Council on Environmental Quality regulations for implementing NEPA (40 CFR Part 1500), this document analyzes and discloses the direct, indirect, and cumulative impacts associated with the proposed changes to the approved plan of operations.

Decision

Based on the analysis and evaluation in the SEIS for the Kensington Gold Project, it is my decision to se-

lect Alternative D. In conjunction with this decision, I am also approving a non-significant Forest Plan amendment to enlarge three Old Growth Habitat reserves as recommended by an interagency review team and described in Appendix 1 to this ROD.

My decision is based upon the analysis and evaluation in this 2004 Final SEIS as well as information incorporated by reference from the 1997 SEIS and ROD and the 1992 EIS and ROD.

My selection of Alternative D, as described in the SETS, approves modifications to the 1997 Approved Plan of Operations to include the following:

- A Tailings Storage Facility (TSF) will be located at Lower Slate Lake rather than a Dry Tailings Facility (DTF) near Comet Beach. The TSF will be sized to accommodate 4.5 million tons of tailings and will ultimately increase the size of Lower Slate Lake from 23 acres to 56 acres. East Fork Slate Creek will be dammed between Upper and Lower Slate Lakes and diverted by pipeline around the TSF. The construction and operation of a water treatment system for the TSF discharge is authorized as required to meet NPDES permit limits. All discharge waters are required to comply with conditions to be established in a National Pollution Discharge Elimination System (NPDES) permit administered by the USEPA.

- Surface processing of ore will be done at mill facilities located on patented (private) lands in the Johnson Creek drainage. A floatation process will be used to separate gold from tailings and gold concentrate will be shipped off-

site for further processing. Tailings will be transported as slurry through a 3.5-mile long pipeline from the mill to the TSF at Lower Slate Lake. Approximately 40% of tailings will be backfilled into underground workings.

- The existing Kensington and Jualin Mine access roads will be upgraded to safely accommodate mine traffic. Two new bridges will be constructed on the Kensington access road and two existing bridges will be upgraded on the Jualin access road. A 3.5-mile pipeline access road and a 1-mile cutoff road will be constructed. All road construction on NFS land will be subject to Forest Service standards and guidelines utilizing Best Management Practices (BMPs).
- Dry Tailings Facility (DTF), personnel camp, and mooring facilities located at Comet Beach will be eliminated.
- A tunnel to connect the Kensington Mine with ore processing facilities on private land near the Jualin Mine in the Johnson Creek drainage will be built.
- A permanent waste rock disposal facility at a 31.5-acre site near the Kensington 850-foot portal and a 4.8-acre site near the Jualin Mine process area will be developed.
- Surface water diversions will be built above the Kensington Mine 850-foot portal and waste rock disposal area, the Jualin process area and mine portal, and the diversion pipeline around the TSF.

- A fresh water infiltration gallery will be constructed in Johnson Creek, subject to ADNR approval, and a 300,000 gallon tank will be built at the Jualin process area for fresh water. A water recycle pipeline will be constructed alongside the tailings slurry pipeline to return process water to the mill.
- Diesel fuel delivery, transport, and storage using 6,500 gallon isotainers. Isotainers will be placed in the laydown area at Slate Creek Cove, near power generation facilities, and at equipment fueling areas. All isotainers will be stored in HDPE-lined and bermed storage areas.
- The development of two new sand and gravel borrow areas, as well as the continued use of two existing borrow areas, disturbing approximately 7.1 acres will provide construction materials.

Included in the Selected Alternative is my decision to adopt the mitigation and monitoring measures identified in the 2004 SEIS as described in section 2.5 that are within the authority of the Forest Service. This includes mitigation measures for safety, and the protection of the environment. My decision is also premised upon other permitting agencies adopting the mitigation and monitoring measures identified in the SETS that are within their authority. In the event that the other mitigation and monitoring measures are not adopted, I will review this decision to determine whether any changes are needed.

The legal framework applicable to authorizing a large mine requires permits from different federal agencies, each of which must engage in consultation

under Section 7 of the Endangered Species Act before the project may proceed. In particular, the mine operator must receive a permit under Section 404 of the Clean Water Act from the U.S. Army Corps of Engineers before construction or operation of marine terminals in Berners Bay. The USACE (and the Forest Service) initiated formal consultation under Section 7 and the USACE will not issue any permit for the marine terminals until consultation is completed. The USACE retains full discretionary authority to deny or condition the terminal permits in response to a biological opinion or the identification of reasonable and prudent alternatives. Therefore, my decision on the plan of operations does not constitute an irretrievable or irreversible commitment of resources foreclosing any reasonable and prudent alternatives with regard to the marine terminals that might be found necessary to avoid jeopardy to an endangered or threatened species.

In addition to a Section 404 permit, the operator must receive Tidelands Leases (Alaska Department of Natural Resources) for construction and operation of marine terminals. Operation of crew transport ferries across Berners Bay and barge traffic is subject to National Marine Fisheries Service (NMFS), U.S. Coast Guard, and Alaska Department of Environmental Conservation regulation. The City and Borough of Juneau (CBJ) has issued an Allowable Use Permit to Coeur for mining operations and Slate Creek Cove marine facility operation. Goldbelt has received a CBJ Conditional Use Permit for operations at Cascade Point.

Rationale for the Decision

In making my decision, I considered the many concerns raised during the analysis of this project, as

well as those raised during the preparation of earlier NEPA documents related to the Kensington Mine. I took into account competing interests and values of the public and included mitigation measures, where possible, to avoid or minimize undesirable effects. All alternatives considered in detail are consistent with Forest Plan standards and guidelines designed to protect resources within the project area. I have carefully reviewed relevant information documented in the SEIS, discussions between cooperating agencies, and mitigation measures applicable to the project. Chapter 2 of the SEIS contains a detailed summary of the effects of each alternative both in tabular and narrative form. Based on that review, I believe that the actions described in Alternative D will be permitted by the other regulatory agencies.

I have also considered input from USEPA in their December 1, 2004, memo (SEIS — Appendix K) identifying their Environmentally Preferred Alternative (Alternative A) and Preferred Alternative (Alternative. A). USEPA stated that their input was provided without the benefit of a completed practicability evaluation by the USACE or a completed Biological Opinion from NMFS.

I am confident those analyses, when completed, will provide information leading to reasonable environmental mitigation measures for project components subject to the regulatory authority of the cooperating agencies.

I have also considered the advice of the State of Alaska in its memo December 1, 2004 (SEIS — Appendix K) to me regarding environmentally preferable and preferred alternatives. The State identified both Alternatives A and D as environmentally preferable and Alternative D as its preferred

alternative. The State of Alaska is confident that mitigation measures identified in the FSEIS, the conditional and allowable use permits issued by the CBJ, agreed to by Coeur in its transportation plan, and those identified in the BA/BE submitted to NMFS on November 17, 2004, will all serve to reduce impacts to minimal levels for resources under the jurisdiction of the State of Alaska, herring in particular. The State of Alaska will be including a number of those mitigation measures in its Tidelands leases for marine facilities and Alaska Coastal Zone consistency review. I agree with the comment and analysis provided by the State.

As noted above, other agencies have the final decision in authorizing the type of transportation system to be used to access National Forest System lands. The FSEIS does, however, attempt to predict likely effects to non-National Forest resources based on anticipated activities and both mandatory and anticipated mitigation. Based on this analysis and current mitigation requirements it appears that the effects to wildlife, fish, and recreational resources in Berners Bay are minimal. It is also possible that additional permit conditions could be imposed under both the USCOE permit and the State of Alaska tidelands lease that would further reduce impacts. Given this conclusion, and the level of concern regarding the effects of helicopter transport on wildlife and recreation expressed during the 1992 and 1997 analyses, both helicopter and vessel transport result in low to moderate effects on various resources, including the recreational setting. As a result transportation related effects are not a deciding factor in my selection of Alternative D.

Alternative D provides the best combination of components to minimize ground disturbance, reduce impacts to wetlands, provide safe and efficient transportation of workers, and reduce on-site fuel storage with the related risk of fuel spills within the framework of existing laws, regulations, and policies while meeting the stated purpose and need.

The Forest Service generally encourages use of private land for construction of privately owned facilities and roads where possible. Alternative A has the greatest impact on NFS lands in terms of surface disturbance (248 acres) whereas alternatives B, C, and D put more of the disturbance onto privately held lands, and impact less acreage of NFS lands (157 acres, 177 acres, and 159 acres respectively for alternatives B, C, and D).

The EPA has indicated that both Alternative A and Alternative B could be permitted under an NPDES permit pursuant to the Clean Water Act. Without additional water treatment, neither Alternative B nor Alternative C could meet expected NPDES permit conditions at all times and, therefore, could not discharge to Slate Creek under all conditions. Alternative C also does not include process water recycling which the EPA has indicated will be required by the NPDES permit (40 CFR 440.104(b)). The open channel diversion of East Fork Slate Creek around the TSF in Alternative C would provide the same minimum in-stream flows to Slate Creek as Alternative D, but would result in more ground disturbance and be more difficult to maintain than the pipeline diversion in Alternative D. Modifying either alternative to address these concerns would make them similar to Alternative D.

Alternative D disturbs approximately 197 acres, of which 96 acres are wetlands, while Alternative A (No Action) disturbs 268 acres, all of which are wetlands. Although the total disturbed wetland acreage is low for all alternatives, Alternative D does reduce wetland disturbance by 171 acres compared to the previously approved plan and virtually all of the wetlands affected by Alternative D will be reclaimed following closure. Approximately 164 acres of wetlands lost to the TSF under Alternative A would not be regained.

Under Alternative D, water treatment and tailings capping offer reasonable assurances that water quality downstream of the TSF will be protected. Reclamation of the TSF, post closure, will recreate habitat lost during operations and restore a viable fish population comparable to pre-operational conditions.

Both the DTF under Alternative A and the TSF under Alternative D pose a minor threat due to the potential for design failure. Any tailings facility approved will be required to be built to high standards. Construction of the TSF dam will require certification from the Alaska State Dam Officer and bonding for maintenance in perpetuity.

Alternative D provides for safer handling of fuels compared to Alternative A. The risk of diesel spills is reduced under Alternative D by requiring all diesel fuel to be delivered, transported, and stored in isotainers rather than pumped from a fuel barge at Comet Beach as under Alternative A. Since fuel storage facilities under all alternatives would be within approved containment the effects of a spill at those facilities would be minimal should one occur.

Slate Creek Cove offers more reliable and safer conditions for marine traffic. This reduces the need to store excess fuels, chemicals, and materials onsite as a contingency for weather delays.

Construction of 4.5 miles of road, common to alternatives B, C, D, results in a minimal change to the character of Roadless Area 301. Roads not required for future monitoring and maintenance will be reclaimed following mine closure and revegetated with native plant species.

The 122-acre DTF under Alternative A would be highly visible from Lynn Canal, the only Visual Priority Travel Route (VPTR) impacted by project components on NFS lands. Figure 4-1 in the SEIS provides a visual simulation of this effect. By eliminating this component, my decision reduces visual impacts along the VPTR.

I recognize the high recreational value of Berners Bay to users. Berners Bay is an outstanding resource that provides unique opportunities for wildlife and landscape viewing. Portions of the operations will be visible from the Forest Service Berners Bay Cabin, Echo Cove, and Point Bridget. Impacts to users of Berners Bay are related to marine facilities at Cascade Point/Echo Cove and Slate Creek Cove and the vessel traffic between them. Although these project components are outside of National Forest System lands, the impacts related to them have been evaluated in the SEIS and are considered in my decision. The Forest Service will work, to the extent practicable, with the other Federal, State, and local agencies, as well as with the operator to minimize these impacts. I believe recreational values will be maintained with the mitigation measures considered in the SEIS. I also recognize that there may be some

forest users that find even these minimal impacts to be unacceptable.

Alternatives Considered in Detail

Four alternatives were considered in detail, including the No Action Alternative. This range of alternatives addressed the major issues associated with this project. The three action alternatives differed from each other in the type and location of various project components. The alternatives are summarized below. Table 2-5 in the FSEIS compares alternatives by key project components.

Alternative A – No Action – As a result of this alternative, the Forest Service would not approve proposed changes to the 1997 Approved Plan of Operations. This alternative includes underground crushing of ore with aboveground grinding and flotation. Flotation concentrate would be shipped to a processing facility off-site. Employees would be housed on-site and transported by helicopter for weekly rotations. Supplies, including fuel, would be delivered to a marine terminal on Comet Beach. Tailings would be dewatered before being placed in a dry tailings facility (DTF) facing Lynn Canal. The DTF would have the design capacity to hold 20 million tons of tailings and would include an engineered berm around each cell of the facility. The production rate would be 4,000 tons of ore per day and 400 tons of waste rock per day. The waste rock would be used in the construction of the DTF. Road and DTF construction would require the development of sand, gravel, and till borrow areas.

Alternative A1: Reduced Mining Rate, DTF – Alternative A1 illustrates the impacts that might occur if the No Action Alternative were selected and the operator chose to mine the same ore volumes pro-

posed in the action alternatives. Alternative A1 reflects a mining plan similar to that described for Alternative A but uses a mining rate and tailings production levels consistent with the Proposed Action (2,000 tons per day and 7.5 million tons total, respectively). *The effects of Alternative A1 were included in the FSEIS for comparison purposes only. The Forest Service does not regulate mining rate or target ore body.*

Alternative A1 would result in 4.5 million tons of tailings being placed in the DTF, assuming 40 percent of the tailings would be backfilled. The DTF would be approximately 65 percent smaller than it would be under Alternative A. The reduced mining rate presented under Alternative A1 would produce very limited amounts of waste rock for DTF construction. For this reason, the impact analysis assumes the same number of acres of sand and gravel borrow areas would be required as under Alternative A, although the coarse and fine till borrow area would be reduced in size. Other aspects of Alternative A1, including transportation of employees and materials, would remain the same as those described under Alternative A. The life of the operation would be reduced to ten years following two years of construction.

Alternative B: Proposed Action – Alternative B reflects a number of changes to the mine plan compared with the No Action Alternative, including constructing a tailings storage facility (TSF) in Lower Slate Lake, relocating milling operations to the Johnson Creek drainage, and eliminating the personnel camp. The operation would mine a smaller amount of ore with a higher average gold concentration compared with that proposed under Alternative

A. Alternative B would include the development of a tunnel connecting the existing Kensington Mine to the process area located near the Jualin Mine in the Johnson Creek drainage. Access to the site would be from marine terminals built in Slate Creek Cove and at Cascade Point. Crew shuttle boats would transport employees daily to and from the project site. The TSF would be sized to accommodate the disposal of 4.5 million tons of tailings. Borrow areas would need to be developed for construction of the TSF dam and roads. The production rate would be approximately 2,000 tons of ore per day. This alternative includes recycling water from the TSF to the mill circuit. Alternative B would require upgrading the 5-mile-long access road from Slate Creek Cove and constructing a 3.5-mile pipeline access road and a 1-mile cutoff road connecting the other two roads.

Alternative C: Dock Location and Design/ Diversion – Alternative C would eliminate the dock at Cascade point and instead include a dock in Echo Cove, approximately 0.75 mile north of the existing Echo Cove boat ramp. Also, the landing craft ramp at the Slate Creek Cove marine terminal would be eliminated, minimizing the amount of fill placed in the intertidal zone. Alternative C does not include recycling process water from the TSF and the mill circuit. This alternative would include diversion channels to direct the flow from Mid-Lake East Fork Slate Creek and overland runoff from undisturbed areas around the TSF. The diversion would discharge to a spillway at the top of the TSF dam. The diversions would require a dam on Upper Slate Lake to maintain water levels sufficient to reach the spillway at the TSF dam. The purpose of the diversion would be to minimize the volume of fresh water in contact with the tailings. The remaining project

components, including the production rate of 2,000 tons per day of ore and the access tunnel, would be the same as those under Alternative B.

Alternative D: Modified TSF Design and Water Treatment – Alternative D was developed to address comments received and concerns about the TSF effluent meeting NPDES permit limitations intended to protect downstream water quality in East Fork Slate Creek below the TSF. Alternative D includes a dam in Mid-Lake East Fork Slate Creek that would gravity feed a pipeline diversion around the TSF. Water would be pumped from the TSF to a reverse osmosis treatment system that would remove solids and metals to ensure compliance with permit limits. The treatment system would discharge to the diversion pipeline. Alternative D also requires the tailings placed in Lower Slate Lake to be capped if the operator cannot demonstrate that the tailings are re¬colonized by plant and shallow-water macro invertebrates at least comparable to pre-mining conditions. The remaining project components would be same as those under Alternative B. Alternative D, the selected alternative, is described in more detail above.

Environmentally Preferable Alternative

Environmentally Preferable Alternatives) is (are) the alternatives) that cause the least damage to the biological and physical environment and which best protect, preserve, and enhance historic, cultural, and natural resources.

I have identified Alternatives A and D as the environmentally preferable alternatives. While both alternatives include environmental impacts ranging from short to long term, each are protective of water and air quality standards. Each has different envi-

ronmentally negative and positive aspects that, when compared, make the two alternatives different but near equal with respect to overall impact to the environment. I have reviewed input from the USEPA and the ADNR in reaching my determination. The written conclusions and rationale from both agencies are provided in Appendix K to the SEIS. While the Forest Service and ADNR appear to be in agreement about the relative effects of the alternatives on the environment, the USEPA differs in its relative weighing of project effects. Several interagency working meetings were held to attempt to reach consensus regarding the environmentally preferable alternative but, contrary to the USEPA' s view, no group consensus was reached.

Comparing numerical differences of similar effects between alternatives (i.e. acres) provides one means of differentiating between the alternatives but is limited to easily measurable effects. Weighing the actual importance of an impact on one resource against a different impact on another resource is a much more difficult undertaking. For example; weighing the extremely low risk of a catastrophic event in one alternative against the certainty of a very small impact in a different alternative results in a very subjective ranking of one alternative against another. In the end, in my opinion, a meaningful difference between Alternatives A and D was not apparent based on the resource values affected, nor the degree to which those values would be affected. Chapter 2 of the SEIS contains a detailed summary of the effects of each alternative both in tabular and narrative form. Chapter 4 of the SEIS contains a detailed discussion of those effects.

Alternatives Eliminated from Detailed Analysis

There were a number of alternatives and project components studied in the 1992 FEIS and 1997 SEIS including submarine tailings disposal, marine discharge of wastewater, and wet tailings disposal in the Sherman Creek drainage, among others. Those discussions are not repeated here. This FSEIS discusses a number of additional alternatives and components including disposal of tailings in Upper Slate Lake, use of tailings in the construction of the Juneau Access Road, helicopter access during eulachon and herring runs, and Cascade Point to Comet Beach crew shuttle access among others. Each is briefly discussed and reasons for not considering the alternative or project component in detail are listed.

Mitigation, Monitoring, and Reclamation

The FSEIS, Chapter 2, Mitigation and Monitoring list the mitigations measures required as part of alternative D that are designed to avoid or minimize potential environmental impacts during construction, operation, and project reclamation. A summary of mitigation measures and a summary of monitoring measures, including various authorities and the responsible parties, are identified in Table 2-6 and 2-7 of the FSEIS respectively. These mitigation measures have been used successfully in other projects with similar types of activities. As a result, they are considered effective and are made part of this decision. The mine operator will be required, as part of the amended plan of operations, to submit mitigation and monitoring plans. Mine construction may not begin until the Forest Service approves the plan of operations.

Environmental monitoring programs that meet the requirements of the Forest Service, USEPA, ACOE,

ADNR, ADEC and other agencies will be implemented. These programs will be designed to determine compliance of the project with the plan of operations, other federal, state and local permits, and to validate the projected effects of the project's construction, operation, reclamation, and post-closure conditions. Impacts that are likely to or do result in violations of regulatory stipulations will require alterations of project operations and/or additional mitigation actions.

Permits, Licenses and Certifications

To proceed with development of the Kensington Gold Project as approved in this ROD, various permits, licenses and certifications must be obtained from federal, state, and local agencies. The following permits must be obtained:

USDA Forest Service

Approval of the amended plan of operations including posting of the approved reclamation bond.

U.S. Army Corps of Engineers

Clean Water Act Section 404 Permits

Rivers and Harbors Act Section 10 Permits

U.S. Environmental Protection Agency

Clean Water Act Section 402 - National Pollutant Discharge Elimination System Permit

Clean Air Act

State of Alaska, Department of Environmental Conservation

Clean Water Act Section 401 Certification of the USACOE Section 404 permit

Clean Water Act Section 401 Certification of the USEPA Section 402 - NPDES permit Air Quality Control Permit

Domestic wastewater system plan approval

Boat requirements (SPCCP and financial assurances)

State of Alaska, Department of Natural Resources

Water rights authorizations

Tidelands leases for marine facilities

Alaska Coastal Zone consistency review

Certificate of Approval to Construct a Dam

Title 41 authorizations for fish passage and fish habitat Right-of-way authorizations

Approval of the reclamation plan.

City and Borough of Juneau

Allowable Use Permit for Gold Mine Development and Production within the Rural Mining District at Berners Bay. (Approved September 13, 2004)

Conditional Use Permit to allow development of a ferry dock and related access at Cascade Point. (Approved October 15, 2004)

Public Involvement

On September 13, 2002, the Forest Service published a Notice of Intent to prepare a Supplementary Environmental Impact Statement (SEIS) for the proposed project in the Federal Register (Vol. 67, No. 178, Page 58011-58012). Cooperating agencies as defined in 40 CFR, section 1501.6 are the U.S. Army Corps of Engineers, Environmental Protection Agency, and The State of Alaska. The National Marine Fisheries Service (NMFS) was invited to participate as a coop-

erating agency, but declined. A Memorandum of Understanding was executed that included the following State of Alaska agencies as participants in the development and review of the SEIS: Alaska Department of Natural Resources (ADNR), Alaska Department of Environmental Conservation (ADEC), and Alaska Department of Fish and Game (ADF&G). On the date of the Notice of Intent, the *Kensington Gold Project Amended Plan Of Operations; Supplemental Environmental Impact Statement; Scoping Document; USDA Forest Service, Juneau Ranger District; September 2002* was distributed to agencies, organizations, tribes, and persons who had previously expressed interest in minerals projects on the Tongass National Forest. Outreach was conducted with public service announcements in the Juneau Empire and by radio media.

On September 17, 2002 a scoping meeting/open house was held in Juneau, Alaska at Centennial Hall, and a second open house on September 19, 2002 in Haines, Alaska at the City Council chambers in City Hall. The open houses were designed to provide background information or technical assistance that the public or interested agencies might need before commenting. The scoping document was made available at these meetings. The formal comment period ended October 15, 2002.

The following significant issues were identified based on comments from the public, other agencies, federally recognized tribes, and non-governmental organizations.

1). Marine-related transportation will impact users of and resources within Berners Bay.

2). Construction and operation of the tailings disposal facility and other mine facilities will impact aquatic resources from Slate and Johnson Creeks to Slate Creek Cove and Berners Bay.

3). The Lower Slate Lake tailings storage facility, docks, access road, and other mine facilities will impact the scenic character of Berners Bay for recreationists.

To address these issues, the Forest Service developed alternatives to the Proposed Action, as described above.

A Notice of Availability of the Draft SEIS was published January 23, 2004 in the Federal Register (Vol. 69, No. 15, Page 3340-3341) and copies of the document distributed to interested and affected parties. A public meeting was held on February 24, 2004 at Centennial Hall in Juneau and on February 26, 2004 at the American Bald Eagle Foundation Building in Haines. The extended comment period for the Draft SEIS closed April 7, 2004. Based on comments to the Draft SEIS, Alternative D was developed. The only new component introduced in Alternative D was a reverse osmosis water treatment facility to address concerns about the TSF effluent meeting NPDES permit limitations intended to protect downstream water quality in East Fork Slate Creek below the TSF.

Planning Record

The planning record for this project includes the Draft SEIS, Final SEIS, appendices, public comments, response to public comments, Forest Plan, all material incorporated by reference including the 1997 SEIS and ROD and 1992 EIS and ROD, and all

materials utilized during the analysis of this project. The planning record is being compiled and will be available for review at the Juneau Ranger District office when legal notice of this decision is published in the Juneau Empire.

Findings Required by Law

Tongass Land and Resource Management Plan, 1997

All project alternatives are consistent with the 1997 Land and Resource Management Plan for the Tongass National Forest. The site is located within an area designated as Modified Landscape with a Minerals prescription. My decision to approve the amended plan of operations for the Kensington Gold Project as described in Alternative D is consistent with the intent of the Forest Plants long-term goals and objectives listed on pages 2-2 to 2-5. The project was designed in conformance with Forest Plan standards and incorporates appropriate Forest Plan guidelines for Modified Landscape with a Minerals prescription (Forest Plan, pages 3-135 to 3-136 and 3-151 to 3-157).

As part of the Kensington Gold Project analysis, three small Old-Growth Reserves (OGR) within the project area were reviewed by an interagency team . These OGRs are synonymous with the Old-Growth Habitat land use designation in the Forest Plan. A non-significant amendment expands the OGRs in VCUs 160, 190, and 200 to meet the requirements of the Forest Plan. (ROD, Appendix 1)

The Roadless Area Conservation Rule (Roadless Rule)

On January 12, 2001 the Forest Service published a final rule for roadless area conservation known as the "Roadless Rule", which generally prohibited commercial timber harvest and road construction within inventoried roadless areas on national forests. In December 2003, the Forest Service exempted the Tongass National Forest from the roadless rule.

Alaska National Interest Lands Conservation Act (ANILCA)

An ANILCA Section 810 subsistence evaluation was conducted. The Kensington Gold Project is located within the City and Borough of Juneau, whose residents are non-rural for subsistence purposes in terms of the ANILCA. Documented subsistence use of the area is limited to the some fishing off Comet Beach by Skagway and Haines residents. The documented use of the project area by rural residents is well below the levels considered for subsistence use. Therefore, no significant restrictions on subsistence resources would be expected by implementing any of the alternatives..

Endangered Species Act

No threatened or endangered species either occur upon or would be affected by project components occurring on NFS land and approved by my decision. The Forest Service has determined that project components occurring outside of NFS land are not likely to affect threatened and endangered species. As indicated above, formal consultation with the NMFS is ongoing, and implementation of my decision is subject to the completion of this process. The USACE retains the full authority to deny or condition the ac-

tivities at the marine terminals in response to a biological opinion and any reasonable and prudent alternatives to protect listed species. Other agencies may, as a result of NMFS recommendations and fmdings, incorporate additional mitigations or modifications. Such mitigations and modifications will be incorporated within the permits of agencies with jurisdiction. The Final Biological Assessment/ Biological Evaluation (BA/BE) submitted to NMFS on November 17, 2004 is included as Appendix J to the SEIS and contains current and expected operating conditions. In the event that other mitigation measures or operating conditions are incorporated, I will review my decision to determine whether any changes are needed.

Essential Fish Habitat

The potential effects of the Kensington Gold Project on essential fish habitat (EFH) have been evaluated. No adverse effects to freshwater EFH will occur as a result of my decision. Although the risk of measurable impact on essential fish habitat has been minimized, I have determined that this project could adversely affect essential fish habitat in the marine environment. Marine components of this project could have short- and long-term adverse effects on EFH. These components will be addressed by other Federal, state, and local agencies that may require mitigation measures to reduce adverse impacts to EFH. In addition, Coeur is sponsoring a monitoring plan by NMFS and the state to assess the effects of petroleum releases into Berners Bay. I will continue to work with the NMFS in evaluating monitoring results. For specific information regarding essential fish habitat and potential impacts refer to sections

4.9 and 4.10, and the EFH Assessment included as Appendix B in the SEIS.

National Historic Preservation Act

A cultural resource survey of the area of potential effect for the Kensington Gold Project was completed in 2003, in compliance with Section 106 of the National Historic Preservation Act. Determinations of eligibility for 43 historic sites within the area of potential effect were submitted to the State Historic Preservation Officer for its concurrence with our determinations of eligibility. In March 2004 the Forest Service completed the determinations of effect for each of the historic properties in each of the proposed alternatives. A mitigation plan to address the adverse effects to historic properties has been documented in a Memorandum of Agreement (MOA) between Coeur Alaska Inc., Alaska State Historic Preservation Officer, and the Tongass National Forest as executed by the Forest Service on November 29, 2004 (FS No. 05MU-111005-017).

Implementation of this MOA during all phases of the mining operations, through closure, evidences that the Tongass National Forest has satisfied its section 106 responsibilities for all undertakings pursuant to the plan of operations.

The area of potential effect was also evaluated for the presence of any Traditional Cultural Properties (TCP). The State Historic Preservation Officer concurred with our determination of "No Traditional Cultural Properties Affected". Members of the Auk Kwaan were consulted regarding TCP in a May 2003 meeting in Juneau in order to complete and verify Forest Service records.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) requires that the Forest Service, when conducting or authorizing activities or development be consistent with the approved Alaska Coastal Management Program (ACMP) to the maximum extent practicable. This activity is one authorized under a Forest Service permit, as defined in 15 CFR 930.51(a). The Forest Service/State of Alaska Memorandum of Understanding on Coastal Zone Management Act/Alaska Coastal Management Program Consistency Reviews (MOU) lists permitted activities normally requiring a consistency determination (MOU, Section 302.8.2.). This activity is listed in Section 302.8.2 as normally requiring a consistency determination. Coastal Project Questionnaires have been completed by Coeur Alaska, and submitted to the State of Alaska for a consistency determination. A consistency determination must be received before the state can issue any permits and before the Forest Service can approve the plan of operations.

Executive Orders

Executive Order 11988 (Floodplain Management)

This area is not located within floodplains as defined by executive order 11988.

Executive Order 11990 (Protection of Wetlands)

Because wetlands are so extensive in the Kensington Gold Project area, it is not feasible to avoid all wetland areas. I have determined that the selected alternative includes all reasonable measures to minimize harm to wetlands, which may result from

such use. A separate permit, issued by the USACOE, is required for all wetland fill. The selected alternative eliminates the permanent loss of 122 acres of wetlands resulting from construction of the DTF. Construction of the TSF will impact 23 acres of wetlands, however, a similar amount of wetlands are expected to develop naturally or be created along the edges of Lower Slate Lake upon the completion of reclamation.

Executive Order 12898
(Environmental Justice)

Implementation of this decision will not result in disproportionate adverse human health or environmental effects to minority or low-income populations.

Executive Order 12962
(Recreational Fisheries)

With the application of Forest Plan standards and guidelines, including those for riparian areas, no significant adverse effects to freshwater or marine fisheries will occur. Most recreational fishing throughout the Tongass National Forest occurs by boat in saltwater, and any adverse effects would be minimal.

Executive Order 13175
(Indian Tribal Governments)

The Forest Service conducted consultations with the Chilkoot Indian Association, Chilkat Indian Village, and the Tlingit-Haida Central Council, as well as regional corporations, on the proposed project.

Executive Order 13186
(Migratory Birds)

Implementation of this decision will not have any significant adverse effects to migratory birds and their habitat. (SEIS Appendix H)

Process for Change During Implementation

Proposed changes to the authorized project actions will be subject to the requirements of National Environmental Policy Act (NEPA), National Forest Management Act (NFMA), Section 810 of Alaska National Interest Lands Conservation Act (ANILCA), Coastal Zone Management Act (CZMA), 36 CFR 228 (Subpart A), and other laws concerning such changes.

In determining whether and what kind of NEPA action is required, the Forest Supervisor will consider the criteria set forth in the Code of Federal Regulations (40 CFR 1502.9(c)), and FSH 1909.15, sec. 18, for determining whether to supplement an existing EIS. In particular, the Forest Supervisor will determine whether the proposed change is a substantial change to the Selected Alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated proposed changes regarding particular areas of specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered.

The intent of field verification is to confirm field conditions and to determine the feasibility and general design and location of a structure or road, but not to designate final locations. Minor adjustments are expected during implementation to better meet on-site resource management and protection objectives.

Many of these minor changes will not present sufficient potential impacts to require any specific documentation or other action to comply with applicable laws. Some minor changes may still require appropriate analysis and documentation to comply with FSH 1909.15, sec. 18.

Implementation of this Decision

Implementation of decisions subject to appeal pursuant to 36 CFR part 215, may occur on, but not before, 5 business days from the close of the appeal filing period.

Right to Appeal

This decision is subject to administrative review (appeal) pursuant to 36 CFR Part 215. Individuals or organizations who submitted substantive comments during the comment period specified at 215.6 may appeal this decision. The notice of appeal must be in writing, meet the appeal content requirements at 215.14 and be filed with the Appeal Deciding Officer:

Denny Bschor, Regional Forester
USDA Forest Service, Region 10
P.O. Box 021628
Juneau, AK 99802-1628

E-mail: appeals-alaska-regional-office@fs.fed.us

The Notice of Appeal, including attachments, must be filed (regular mail, fax, e-mail, express delivery or messenger service) with the Appeal Deciding Officer at the correct location within 45 calendar days of publication of notice of this decision in the Juneau Empire, the newspaper of record for the Tongass National Forest. The publication date in the newspaper of record is the exclusive means for calculating the

time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

Hand delivered appeals will be accepted at the Regional Office in Juneau, Alaska during normal business hours (8:00 am through 4:30 pm) Monday through Friday, excluding holidays.

In accordance with 36 CFR Part 215.14, it is the responsibility of those who appeal a decision to provide the Appeal Decision Officer sufficient evidence and rationale to show why the Responsible Official's decision should be remanded or reversed. The written notice of appeal filed must meet the following requirements:

1. State the document is a Notice of Appeal filed pursuant to 36 CFR part 215;
2. List the name, address, and telephone number of appellant;
3. Identify the decision document by title and subject, date of the decision, and name and identify the specific change(s) in the decision that the appellant seeks or portion of the decision to which the appellant objects;
4. State how the Responsible Official's decision fails to consider comments previously provided, either before or during the comment period specified in 36 CFR 215.6 and, if applicable, how the appellant believes the decision violates law, regulation, or policy.

Contact Person

For additional information concerning this decision or the Forest Service appeal process, contact

Pete Griffin
Juneau District Ranger
8465 Old Dairy Road
Juneau, Alaska 99801(907) 586-8800

/s/Forrest Cole 12.9.04

FORREST COLE Date

Forest Supervisor

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Appendix 1
Non-significant amendment to Forest Plan

SIGNIFICANCE ANALYSIS FOR A NON-SIGNIFICANT AMENDMENT TO THE FOREST PLAN

Small Old-Growth Reserve (Habitat) Modifications in Value Comparison Units 160, 190, and 200

During the development of the *1997 Forest Plan Final Environmental Impact Statement*, a conservation strategy was designed to ensure that implementation of the Forest Plan would provide a reasonable assurance of maintaining viable and well-distributed wildlife populations across the Tongass National Forest for 100 years. As part of this conservation strategy, a forest-wide system of large, medium, and small Old-Growth Habitats or Reserves (OGRs) was established and a set of standards and guidelines developed to preserve the integrity of the forest's old-growth ecosystem. The habitats have been identified and mapped in the 1997 Forest Plan.

The Old-Growth Habitat land use designation provides for evaluation and possible adjustment of the location of the habitats based on site-specific information. Where feasible, the boundaries should follow geographic features so that they can be recognized in the field. The 1997 *Forest Plan Record of Decision* committed the Forest Service to work with the Alaska Department of Fish and Game (ADG&G) and the U.S. Fish and Wildlife Service (USFWS) to review the location, size, and suitability of the OGRs during project-level planning.

As part of the Kensington Gold Project analysis, three small OGRs were identified within the project area (Figure 1). Small OGRs require a contiguous landscape of at least 16 percent of the total Value

Comparison Unit (VCU) area and 50 percent of this area must be productive old-growth timber. Along with the general criteria of size and productivity, connectivity is also a criterion. The design of each habitat should be based on wildlife concerns specific to the area. Criteria commonly used in designing small habitats include important deer winter range, probable goshawk nesting habitat, probable marbled murrelet nesting habitat, large forest blocks, rare plant associations, and landscape linkages. VCUs are distinct geographic areas encompassing one or more large stream systems with boundaries that follow watershed divides.

The study area includes three VCUs (160, 190, and 200) with a small OGR within each. The Forest Service, ADF&G, and USFWS conducted an interagency review of the existing mapped small OGRs in November 2003. The review team determined that none of the mapped small OGRs in the study area met the requirements for size or the amount of productive old growth established under the Forest Plan and recommended non-significant modifications to each of the small OGRs. The findings and recommendation of the interagency review team are summarized below by VCU and explained in more detail in Appendix F of the *2004 Kensington Gold Project Supplemental Environmental Impact Statement* (SEIS).

VCU 160

Finding: The small OGR in VCU 160 does not meet Forest Plan standards and guidelines for size. This small OGR covers 802 acres and is 573 acres short of the 16 percent of VCU requirement.

Recommendation: Increase the size of the small OGR in VCU 160. The redrawn boundaries of this OGR

will border but not include the tailings storage facility, access roads, pipeline, and maintenance access facilities.

VCU 190

Finding: The small OGR in VCU 190 does not meet the Forest Plan standards and guidelines for size nor percentage of productive old growth (POG) needed. This small OGR covers 1,299 acres and is 106 acres short of the 16 percent of VCU requirement. Existing POG is 615 acres; 106 acres short of the 50 percent POG requirement.

Recommendation: Expand to the north in light of existing natural fragmentation and limited amounts of productive old growth.

VCU 200

Finding: The small OGR within VCU 200 does not meet the Forest Plan standards and guidelines for productive old growth. Existing POG is 648 acres; 227 acres short of the 50 percent POG requirement.

Recommendation: Due to the naturally fragmented area, additional acres were used in the adjacent VCU160. Appendix K of the Forest Plan allows for up to 30 percent of an OGR to be mapped in an adjacent VCU if the resulting habitat achieves the objectives of the old-growth habitats. The interagency review team agreed that expanding the small OGR in VCU 200 to include portions of VCU 160 would increase connectivity values, capture important beach and estuary fringe habitats and riparian habitats, and include higher-volume stands. The approximately 36 percent of the recommended modified OGR would extend into VCU 160.

The. Secretary of Agriculture's implementing regulation indicates the determination of significance is to be "...based on an analysis of the objectives, guidelines and other contents of the forest plan" (36 CFR 219.10(f)). The Forest Service has issued guidance for determining what constitutes a "significant amendment" under the National Forest Management Act. This guidance, in Forest Service Handbook (FSH) 1909.12 - Chapter 5.32, identifies four factors to be used in determining whether a proposed change to a forest plan is significant or not significant. These four factors are (1) timing; (2) location and size; (3) goals, objectives, and outputs; and (4) management prescriptions. An analysis of the factors is presented below.

Timing – The Tongass Forest Plan Revision was completed in 1997. The Old-Growth Habitat land use designation provides for evaluation and possible adjustment of the location of the habitats based on site-specific information. Project level analysis for the Kensington Gold Project in 2003 determined that existing OGRs in the study area did not meet Forest Plan standards and guidelines.

Location and Size – These modifications increase the size of three small OGRs to meet Forest Plan standards and guidelines and better preserve areas of old-growth forest and their associated natural ecological processes to provide habitat for old-growth associated resources. OGRs in VCUs 160, 190, and 200 will be increased in size by 652,163, and 458 acres, respectively.

Goals, Objectives, and Outputs – The boundary modifications approved here will increase the connectivity from higher elevations to the beach and estuary fringe habitats and additional riparian habi-

tat, and would increase the number of intact patches of medium- and high-volume old-growth stands. Maintaining forested corridors between OGRs or other non-development land use designations is a key component to maintaining viable wildlife populations on the forest.

Management Prescriptions

These recommendations would move 1,615 acres of productive old growth in land use designations suitable for timber harvest, into OGRs unsuited for timber harvest. Table A¬1 summarizes the cumulative effects of small OGR adjustments on the Forest to date. Individually and cumulatively the changes to acres suitable for timber harvest are minor.

Table A-1
Effects of Forest Plan Amendments on Acres Suitable for Timber Harvest as of December 2004

Project	Non-development to Development LUD Suitable Acres	Development to Non-development LUD Suitable Acres	Net Change in Suitable Acres
Kensington Gold EIS	0	1,615	-1,615
Madan EIS	377	1,501	-1,124
Finger Mountain EIS	0	593	-593
Cholmondoley EIS	894	6,873	-5,979
Woodpecker EIS	180	130	+50
Polk Small Sales EA	0	153	-153
Threemile EIS	458	826	-368
Fire Cove Salvage	186	633	-447
Salty EA	99	126	-27
Luck Lake EIS	257	794	-537
Doughnut EIS	0	19	-19
Kuakan EIS	416	542	-126
Sea Level EIS	185	500	-315
Canal Hoya EIS	0	151	-151
Chasina EIS	0	78	-78
Control Lake EIS	446	142	+304
Crystal Creek EIS	481	1,153	-672
Nemo Loop EA	177	932	-755
Todahl Backline EA	2	363	-361
Niblack EA	252	0	+252
Total	**4,700**	**17,759**	**-13,059**

Conclusion

Based on the analysis and recommendations of the interagency review team and the significance analysis above, the OGRs within VCUs 160, 190, and 200 will be modified as described in Appendix F of the 2004 Kensington Gold Project SEIS and shown in Figure 2. No direct or indirect effects on OGR is expected other than the positive effect of adjusting the boundaries of the existing small OGRs to comply with Forest Plan standards and guidelines. This amendment is fully consistent with current Forest Plan goals and Objectives.

This analysis in combination with the 2004 Kensington Gold Project SEIS and ROD document my decision to amend the Forest Plan with a non-significant amendment expanded OGRs in VCUs 160, 190, and 200.

/s/Forrest Cole _____ 12.9.04

FORREST COLE
Forest Supervisor

Date

APPENDIX K

RECLAMATION AND CLOSURE PLAN FOR THE KENSINGTON GOLD PROJECT

Coeur Alaska, Inc.
Juneau, Alaska

Prepared by:

KC Harvey, LLC
Bozeman, Montana

May 5, 2005

1.0 INTRODUCTION

The Kensington Gold Project (Project) is a proposed underground gold mine located approximately 45 miles north of Juneau in Southeast Alaska (Figure 1). The project covers both private lands managed by the Alaska Department of Natural Resources (ADNR) and public lands managed by the United States Forest Service (USFS). Coeur Alaska, Inc. (Coeur), a wholly owned subsidiary of Coeur d'Alene Mines Corporation, is the operator.

This reclamation and closure plan has been prepared in response to the Final Supplemental Environmental Impact Statement (SEIS) and Record of Decision (ROD) published by the U.S. Department of

Agriculture, Forest Service in December 2004. This plan addresses conceptual reclamation principles and facility-specific reclamation plans that are required as part of the Plan of Operations (POO) for closure of the property. This plan reflects the alternative chosen in the Final SEIS ROD and includes comprehensive cost estimates to be used for bonding purposes. The plan incorporates key reclamation, closure and monitoring requirements described in the Final SEIS ROD, and individual, applicable permits for the project. This updated reclamation plan and reclamation cost estimate also serves as the basis for establishing a financial mechanism for the site to ensure that the initial reclamation and long-term operating and monitoring costs are guaranteed.

The major components associated with the Project are an underground mine, mill site, a tailings storage facility (TSF), two waste rock repositories, borrow areas, an administrative office, maintenance and generator facilities, and a marine dock facility (Figure 2). Ancillary facilities include access roads, topsoil stockpiles, diversion systems, a wastewater facility, water supply, and other minor facilities.

The focus of the project is underground mining of a mesothermal gold deposit. The mine's life is estimated to be approximately 10 years, at a production rate of approximately 2,000 tons of ore and 400 tons of underground development rock (waste rock) per day.

The mine would be accessed through the existing 800 Level portal and a newly defined portal (1,000 Level Portal) on the Jualin side of the project (Figure 2). Mined ore would be hauled or conveyed to the process facilities adjacent to the Jualin Portal. Processing of the ore would consist of a flotation circuit produc-

ing a concentrate from the diorite host rock. The flotation tailings would be slurried by gravity through a pipeline to the proposed tailings storage facility (TSF) located at Lower Slate Lake (Figure 2). The bathymetry of the lake is conducive to the conventional slurried disposal of tailings behind an embankment, and allows for the reestablishment of the lake at closure.

Mining would occur 365 days per year; year-round processing would occur over the estimated 10-year life of the mine. Site reclamation and closure tasks are expected to generally be completed two years after cessation of all mining activities. The schedule for completing the physical reclamation is discussed in Appendix A.6. Some project facilities will remain during the ....

* * * * *

3. Establishment of long-term, self-sustaining vegetation communities by reseeding with native plants and promoting natural invasion (recolonization) and succession;

4. Protection of surface and ground water quality including compliance with all water quality standards at closure;

5. Protection of public health by reducing potential hazards typically associated with mines and processing facilities;

6. Establishment of fisheries and wildlife habitat and recreational resources; and

7. Minimization of long-term closure requirements, especially for ongoing care and maintenance.

Coeur has incorporated sound engineering principles in this reclamation plan to achieve these goals and uses.

2.2 Summary of Final SEIS Reclamation Requirements

Based on the analysis and evaluation in the Final SEIS for the Kensington Gold Project, the USFS made the decision to select Alternative D for mining and reclamation, as documented in the ROD. Alternative D requires that the reclamation plan be revised (this document) to encompass the activities described in the Final Plan of Operations. This section of the revised reclamation and closure plan summarizes the general reclamation requirements under Alternative D, as described in the SEIS. This summary reflects current mining, mitigation and reclamation plans described in the Final Plan of Operations.

The first step in reclamation would involve the removal and storage of growth media from all areas to be disturbed. Stockpiled growth media would be seeded to reduce the potential for erosion during storage.

Final reclamation would begin at the final stages of mining operations. Facilities not necessary for the reclamation process, including storage tanks and buildings, would be decommissioned and either salvaged or demolished. These materials would be removed from the site. After facilities were removed, concrete pads would be broken into pieces and covered with fill material. Compacted areas (excluding the buried concrete pads) would be ripped, and all areas would be graded to blend with the surrounding natural topography. Roads would remain in place as long as required to conduct monitoring activities.

Closure and reclamation of all roads on the Kensington side would include removing culverts, ripping the road surface, and contouring the cut-and-fill slopes to blend with the surrounding terrain. Stream crossings would be returned to their original condition, and bridges and culverts would be removed if they were determined not to be necessary for post-closure access. The access road from Slate Creek Cove to the Jualin Mine site could remain in place under RS 2477. All piers, decking, and pilings would be removed from the Slate Creek Cove marine terminal. The fill within the tideland lease area is expected to have recolonized naturally and removal may not be required. The fill will be removed as is necessary under the State of Alaska tideland lease. This issue will be evaluated prior to closure and addressed in the final closure plan. For the purpose of bonding removal of the fill was included in this plan.

Later stages of final reclamation would include the removal of stormwater diversions and sedimentation ponds, followed by regrading and revegetation. The final stages of reclamation would include removal of the remaining structures and covering the mine portals with a steel grate. Growth media would be spread over regraded areas to a maximum depth of one-foot followed by seeding. The depth of growth media, plant species, and seed mixtures, as well as the use of fertilizer and soil amendments (e.g., lime), would be determined through the use of test plots developed during the life of the operation. Mulch and other BMPs would be used to minimize erosion until vegetation became established. A monitoring program would be established to track reclamation success (see Section 4.2).

The tailings access road would remain as long as necessary for maintenance and monitoring of the TSF, which is being bonded for 100 years.

The tailings in the Lower Slate Lake TSF would be deposited to an elevation of 704 feet with a water cover of at least nine feet. At closure, the lake level would be raised to an elevation at which the TSF would create or inundate at least the same acreage of natural sediment in shallow areas that support plant life and macroinvertebrates as was present in Lower Slate Lake before mining. The contingency water treatment system and diversion pipeline would continue to be operated, if needed, until the operator demonstrated that downstream water quality can be protected without the need for treatment. Once this was demonstrated to USEPA, ADEC, and the Forest Service, the treatment system and pipeline would be removed. A four- to-six-inch tailings cover/amendment is a contingency for reclamation of the TSF. Coeur Alaska will be conducting testing during mine operations to demonstrate the habitability of the tailings and if a cover/amendment is necessary.

The time required to implement the TSF reclamation plan, including establishing the final lake level, would vary depending on upstream flows and precipitation. Coeur Alaska would be required to continue to comply with minimum instream flows established by ADNR throughout the reclamation period.

The TSF reclamation would focus on restoring resident fish populations and would include a littoral zone, as well as areas deep enough for overwintering. The discharge from the reclaimed lake would occur through a spillway constructed in bedrock. The

spillway would be designed to handle runoff conditions and storm events as required by the State Dam Safety Engineer. A reconstructed channel from the spillway would be designed so that fish would be able to safely move down the system and into East Fork Slate Creek. The project operator would be required to establish a funding mechanism to ensure the long-term monitoring and maintenance of the tailings dam. The details of the funding and long-term plan would be established with the Dam Safety permit from the state. Financial assurance will also be established to ensure the overall site reclamation program is carried out to completion.

APPENDIX L

STATE OF ALASKA

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER
Water Non-Point Source Pollution Control Program

Frank H. Murkowski, Governor
555 Cordova Street
Anchorage, AK 99501-2617
Phone: (907) 269-6281
Fax: (907) 269-7508
TTY: (907) 269-7511
http://www.state.ak.us/dec/

May 6, 2005

Certified Receipt Number
#7004 1160 0004 2848 6168
Return Receipt Requested

Rick Richins
RTR Resource Management, Incorporated
1109 W. Main Street
Boise, Idaho 83702

Subject: Lynn Canal 31 M, Kensington Mine
Reference No. POA-1990-592-M
State I.D. No. AK 0406-13J

Dear Mr. Richins:

In accordance with Section 401 of the Federal Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation is issuing the enclosed Certificate of Reasonable Assurance for the proposed development of new mine facilities and associated infrastructure within stale waters and wetlands, 45 miles northwest of Juneau, Alaska.

Since this certification also serves as a waste management and disposal authorization, it expires on May 5, 2010.

Department of Environmental Conservation regulations provide that any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15,185. Informal review requests must be delivered to the Director, Division of Water, 410 Willoughby Ave., Juneau 99801, within 15 days after receiving this certification. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of -Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the date of this certification. If a hearing is not requested within 30 days, the right to appeal is waived.

By copy of this letter we are advising the U.S. Army Corps of Engineers and the state Office of Project Management and Permitting of our actions and enclosing a copy of the certification for their use.

Sincerely,

SIGNATURE ON FILE
Ron Klein
Program Manager

Enclosure

CC: (with encl.)
John Leeds,
COE Juneau
Pete McGee,
ADEC Fairbanks
People who commented

EPA, AK Operations

F&WS

DNR/OPMP Juneau

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CERTIFICATE OF REASONABLE ASSURANCE

A Certificate of Reasonable Assurance, in accordance with Section 401 of the federal Clean Water Act and the Alaska Water Quality Standards, is issued to Coeur Alaska, Incorporated, 3031 Clinton Drive, Suite 202, Juneau, Alaska 99801, for the proposed placement of fill into approximately 61.7 acres of wetlands and waters, in the development of mining facilities and associated infrastructure. The purpose of this filling is to relocate the major mine components from the Kensington Mine in the vicinity of Comet Beach on Lynn Canal to the Jualin Mine (2 miles to the southeast) in the vicinity of Slate Cove. This is necessary in order to access the ore body from the Jualin side of the peninsula. This certificate also substitutes for, and serves as, a state integrated waste management and disposal authorization under 18 AAC 60.200(b) and AS 46.03.100(d). The department will enforce the terms and conditions of this certification in the same way that it would require compliance with a permit issued under 18 AAC 60 or 18 AAC 72 for the same activity.

The Tailing Disposal Facility (TDF) proposed to be constructed in Slate Creek will be considered a "disposal site" under federal law and policy (see 40 CFR § 230.3(i)), and is hereby authorized as a "treatment work" under state law (see AS 46.03.900(33)). Thus, State of Alaska water quality standards will not have to be met within that area. 18 AAC 70.010(c). Water discharged from the TDF shall meet NPDES permit limitations, and the receiving water, East

Fork Slate Creek, must meet state water quality standards.

Proposed facilities requiring said fill placement are listed in Table 1.

The proposed activity is located within Section 1, T36S, R61E; and Sections 10, 14, 15, 23, 24, 25, and 36, T35S, R61E, Copper River Meridian, on the west side of Berners Bay in the vicinity of Slate Creek Cove, 45 air miles northwest of Juneau, Alaska.

Public notice of the application for this certification was given as required by 18 AAC 15.180.

Water Quality Certification is required under Section 401 because the proposed activity will be authorized by a Corps of Engineers permit, reference number POA-1990-592-M, and a discharge may result from the proposed activity.

Table 1 - Kensington Gold Project -- Facility Acres

Area	Facility Description	Status	Acres of Waters of the U.S.**	Fill Volume***	Mechanical Land Clearing (acres)
1	Kensington Comet Beach Camp	Existing/ Permitted	0	0	0
2	Kensington Road	Permitted	(0.9)	0	0
3	Kensington Borrow Source	Proposed Expansion	(0.3)	0	0.3
4	Kensington Development Rock Storage	Existing/ Permitted	(5.1)	(500,000)	0
5	Kensington Water Treatment Plant/ Ponds	Existing/ Permitted	(2.6)	(20,000)	0
6	Kensington Top-soil Stockpile Area	Permitted	(2.1)	(30,000)	2.1
7	Kensington 2050 Waste Rock Dump	Existing	0	0	0
8	Jualin Process Area	Proposed	1.1	21,000	1.1
9****	Jualin Develop-ment Rock Storage	Proposed	4.3	100,000	4.3
10	Jualin Process Area Treatment Pond	Proposed	0	(20,000)	0
11	Jualin Process Area-Topsoil Stockpile	Proposed	0	(10,000)	0.3
12	Jualin Pumphouse Area	Proposed	0.1	0	0.1
13	Jualin Access Road	Proposed Expansion	8.2	26,000	8.2
14	Jualin Laydown Area #1	Existing	(0.4)	(4,800)	0
15	Jualin Laydown Area #2	Proposed	(3.5)	0	3.5
16	Jualin Laydown Area #3	Existing	(0.8)	0	0
17	Jualin Admini-stration Area	Existing	(2.5)	(32,000)	0
18	Jualin Borrow Source #1	Proposed Expansion	0	0	0
19	Jualin Borrow Source #2	Proposed Expansion	(0.1)	0	0.1
20	Jualin Borrow Source #3	Proposed Expansion	(2.4)	0	2.4

Area	Facility Description	Status	Acres of Waters of the U.S.**	Fill Volume***	Mechanical Land Clearing (acres)
21	Jualin Borrow Source #4	Proposed	(0.7)	0	0.7
22	Tailings Facility Access Road & Pipeline	Proposed	4.7	20,000	4.7
23	Tailings Facility Access Road	Proposed	0.3	2,000	0.3
24	Tailings Lake (tailings as fill)	Proposed	23.5	3,168,000	23.5
25	Tailings Lake Margin Working Area	Proposed	8.25	450	8.25
25a	Tailings Lake Water Treatment Plant	Proposed	0.24	1000	0.24
25b	Tailings Lake Diversion Pipe Intake Dam	Proposed	0.01	25	0
26	Tailings Dam Borrow Source	Proposed	(0.3)	0	0.3
27	Tailings Pipeline and Access Road	Proposed	3.0	15,000	3.0
28	Tailings Dam and Plunge Pool Area	Proposed	5.9	120,000	0
29	Slate Creek Cove Marine Terminal	Proposed	1.9	10,475	1.9
30	Slate Creek Cove Topsoil Stockpile	Proposed	0.2	4,000	0.2
TOTALS			**61.7**	**3,487,950**	**65.49**

**Areas in parentheses are existing, permitted, or have no fill associated with the disturbance to wetlands

***Fill volumes in parentheses are existing or have been previously permitted

****Of the proposed facilities in this amendment, this is the only facility which will not be reclaimed as wetlands

Having reviewed the application and comments received in response to the public notice, the Alaska Department of Environmental Conservation certifies that there is reasonable assurance that the proposed activity, as well as any discharge which may result, will comply with applicable provisions of Section 401 of the Clean Water Act and the Alaska Water Qual-

ity Standards, 18 AAC 70, provided that the following conditions are adhered to.

1. The permittee shall submit mine operations, water quality monitoring, and closure plans to the department for its approval before introducing any discharge into the TDF and shall secure department approval for any modification to approved plans.

2. During construction of the tailings dam the construction area shall be isolated from the flowing waters. Techniques such as stream diversion, dam and pump, or stream fluming shall be incorporated into the construction activity to insure that silt laden water resulting from construction activities is not carried downstream and to marine waters.

3. All soil disturbing construction operations that would increase turbidity of surface waters to levels that would violate Alaska Water Quality Standards shall be temporarily suspended if on site monitoring demonstrates said violations.

4. For culverts which carry waters that are discharging or-will discharge into fish-bearing fresh waters or marine waters, installation shall not occur within the flowing waters of the stream/drainage. Culvert installation techniques such as stream diversion, dam and pump, or stream fluming shall be incorporated into the installation activity to insure that silt laden water is not carried into sensitive fish habitat. DNR Habitat permits shall address the anadromous fish-bearing streams.

5. Any disturbance in the stream banks or streambed areas shall be stabilized to prevent erosion and resultant sedimentation of the water body during and after operations. Any disturbed areas shall be re-contoured and revegetated as soon as practicable.

6. During the construction and operational phases, spill response equipment and supplies shall be available on site for the cleanup and containment of petroleum product leaks or spills.

7. The wooden portions of the terminal docking shall not be treated with a preservative containing pentachlorophenol and if treated with creosote, the creosote shall be applied via pressure treatment that inhibits leaching at a rate that causes a sheen to form on the water.

8. The mine tailings shall be tested on a quarterly basis, in accordance with a monitoring plan approved by the department, to insure there are no significant deviations from the original tailings analysis which may affect monitoring, closure requirements, water quality, or any other permit condition. Constituent levels that shall be measured include, but are not limited to, aluminum, ammonia, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, nitrate, pH, selenium, silver, sulfate, total dissolved solids (TDS), zinc, meteoric water mobility, and acid base accounting. These analyses shall be included in the annual report to the U.S. Forest Service for all agencies to review.

9. Untreated runoff from the topsoil stock pile shall not be allowed to reach any natural body of water.

10. Construction of the infiltration gallery shall be isolated from the flowing waters of the stream.

11. Intertidal fill placed for the marine terminal shall be clean of organics. Fill shall be placed during low tide in those intertidal areas which are dry during low tide.

12. The appropriate water quality protection BMPs shall be utilized during the proposed timber harvest around Lower Slate Lake, to protect the waters of the lake, stream, and ocean.

13. Bridge abutment construction shall be isolated from the flowing waters of the stream.

14. Coeur Alaska, Inc., shall provide proof of financial responsibility in an amount and in form[s] acceptable to the Department, in accordance with AS 46.03.100(f) and 18 AAC 60.265. If the financial assurances provided to other state and federal agencies are not sufficient to satisfy the Department's requirements, Coeur Alaska, Inc. will provide any additional financial assurances determined by the Department to be necessary.

15. Capping of the tailings, addition of organics, or other state approved mitigation measures will be required at or after mine closure if water quality criteria are not met in the impoundment, or if the tailings do not successfully re-colonize as determined by the state.

Date **May 6, 2005**

SIGNATURE ON FILE

Ron Klein
Program Manager

APPENDIX M

DEPARTMENT OF THE ARMY PERMIT

ENG FORM 1721, Nov 86 EDITION OF SEP 82 IS OBSOLETE (33 CFR 325 (Appendix A))

Permittee: COEUR ALASKA, INCORPORATED

Permit No.: POA-1990-592-M, LYNN CANAL 31

Issuing Office: U.S. Army Engineer District, Alaska

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Dredge, place structures, and discharge an approximate total of 3,487,950 cubic yards of fill and dredged fill materials into an approximate total of 61.7 acres of waters, including forested and scrub shrub wetlands, deep-water habitat, and into other waters, and navigable waters of the United States (U.S.), in conjunction with the construction of new mine facilities and associated infrastructure, as described in the attached Tables 1 and 2, and drawings, 12 sheets, dated April 2005. Approximately 65.49 acres of U.S. waters will be mechanically land cleared, prior to excavation and/or construction activities.

All work will be in accordance with the attached Tables 1 and 2, and drawings (14 sheets, dated April 2005).

The following action authorized May 6, 1998, by Department of the Army (DA) permit POA-1990-592-2 (2-90059), is hereby eliminated from DA authorization:

> "Mechanized land clearing, followed by the excavation of wetlands, and the placement of fill to construct the base, containment and drain structures for the dry tailings storage facility (DTF), a footprint of 113 acres in wetlands."

Project Location: The project site is located within Section 1, Township 36 South, Range 61 East; and Sections 10, 14, 15, 23 through 25, and 36, Township 35 South, Range 61 East, Copper River Meridian; USGS Quadrangle Juneau D-4; Latitude 58°46'56" North, Longitude 134°00'36" West; north of Juneau, Alaska.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **30 June 2008**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party

in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished In accordance with the terms and conditions of your permit.

Special Conditions:

SEE ATTACHED LIST OF PERMIT CONDITIONS

Special Information:

Any condition incorporated by reference into this permit by General Condition 5, remains a condition of this permit unless expressly modified or deleted, In writing, by the District Engineer or his authorized representative.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the Information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a revaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fall to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209:170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

/s/Timothy J. Gallagher _____ June 17, 2005 _____
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below,

/s/Larry L. Reeder	June 17,2005
FOR: (DISTRICT ENGINEER)	(DATE)

Colonel Timothy J. Gallagher
Larry L. Reeder, Chief
Regulatory Branch

When the structures or work authorized by this permit are still in existence at the time the property is transferred the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions have the transferee sign and date below.

(TRANSFEREE)	(DATE)

Special Conditions for Corps Permit

POA-1990-592-M

FAILURE TO COMPLY WITH CORPS OF ENGINEERS PERMIT CONDITIONS MAY BE GROUNDS TO MODIFY, SUSPEND, OR REVOKE THE DEPARTMENT OF THE ARMY PERMIT

GENERAL

1. Any condition incorporated by reference into this permit by Special Condition or by General Condition 5, remains a condition of this permit unless expressly modified or deleted, in writing, by the District Engineer or his authorized representative.

2. The work limit for each mine component, in waters of the United States, shall be clearly identified in the field prior to excavation, clearing and/or construction. The fill limit boundaries shall be located and flagged prior to fill placement. Permanent markers shall be placed and monumented so an observer can delineate the clearing and fill limits while walking on the ground at the site.

3. Permittee shall be responsible to obtain all permits and comply with all appropriate State and Federal Statutes for oil storage and transfer. An oil storage facility shall be subject to the provisions of a plan of operation approved by the United States Coast Guard and Oil Spill Contingency Plan approved by the Alaska Department of Environmental Conservation.

4. Permittee shall provide an annual progress report to the Corps on project status. This report

shall summarize the wetland acres disturbed and reclaimed. The report will be due annually on or before February 15.

5. The permittee shall ensure that all project contractors and all workers whose work is subject to this permit are advised of its terms and conditions.

6. Permittee shall comply with the terms and conditions of the most recently approved version of the Kensington Gold Project's "*Final Plan of Operations*", to include "*Appendix I, Reclamation and Closure Plan*", as approved by the U.S. Forest Service. All measures involving concurrent and end-of-project reclamation in wetlands shall become enforceable conditions of the Department of the Army (DA) permit. The DA recognizes that the reclamation document is a 'living' document and will undergo many revisions between now and project closure, to comply with pertinent Federal, state and local regulations.

7. Permittee shall minimize tree clearing at the mine and mill complex and along the haul road, and shall maintain as large a buffer of standing timber as practicable between the haul road, the mill and the processing area at Berners Bay.

8. Permittee shall identify methods in the approved Plan of Operations and implement the best management practices that allow far quick action to be taken where erosion is imminent or under way.

9. Permittee shall reclaim disturbed areas on steep slopes and shall avoid disturbing steep slopes during inclement weather.

10. A nontoxic chemical flocculent shall be added to the slurry to enhance the deposition of suspended particles in the Lower Slate Lake disposal site [see CFR 230.71(d)].

FRESHWATER

11. A brush berm or equivalent shall be placed on the wetland permit boundaries down gradient of flow to keep sediment from leaving the project site. The berm footprint shall not exceed the approved permit boundary.

12. Natural drainage patterns shall be maintained in the project area by the installation of culverts in sufficient number and size under access roads to prevent flooding or excessive drainage of adjacent wetlands. The flood channels identified in the approved permit boundary in and around laydown yards and pads shall be clearly marked and shall remain undisturbed except as shown in the approved permit boundary.

13. No fill or construction materials will be stockpiled, temporarily or permanently, on adjacent wetlands or waters outside the approved footprint.

14. All surface disturbances in wetlands shall be confined to the project footprint to prevent unnecessary damage to adjacent wetland areas. No motorized equipment shall be operated, stored or serviced outside of approved areas. No fuel, lubricants, or other hazardous substances shall be stored below the Ordinary High Water level of Johnson Creek, Slate Creek, Ophir Creek or Sherman Creek, Upper Slate Lake, Lower Slate lake, or below the High Tide Line of Berners Bay or Lynn Canal.

15. Permittee shall construct a cofferdam in East Fork Slate Creek, to capture Upper Slate Lake waters and other waters and divert the water via a diversion pipeline past the Tailings Storage Facility (TSF) and into the East Fork Slate Creek segment located below the dam.

16. The waters and the discharged processed mine tailing sediments, located in Lower Slate Lake, shall be tested, at lake closure or just prior to cessation of discharges of mine wastes into Lower Slate Lake, in accordance with appropriate testing requirements (at the time of closure) for the presence of toxic materials and contaminants and the results shall be made available to the United States Army Corps of Engineers, Alaska District, Regulatory Branch, for dissemination to the appropriate State and Federal resource agencies.

17. Silt screens or other appropriate methods shall be used to confine suspended particles and turbidity to a small area where settling can occur in Lower Slate Lake (see 40 CFR 230.73[c]), and include filter blankets and curtains to filter out suspended solids.

18. No in-water work shall occur in Johnson Creek between May 1 through October 1, to direct construction to low-flow periods.

MARINE

19. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or

work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

20. All steel piles shall be driven using a vibratory hammer. Under those-conditions where impact hammers are required for reasons of seismic stability or substrate type, the piles shall be driven as deep as possible with a vibratory hammer prior to the use of the impact hammer. The impact hammer shall be used at a time of year when larval and juvenile stages of fish species are not present: this will be coordinated with the Alaska Department of Natural Resources, Habitat.

21. All piles shall be driven when the current is reduced (i.e., centered around slack current) to minimize the number of fish exposed to adverse levels of underwater sound.

22. Permittee shall either use a block of wood between the impact hammer and the pilings, and/or use a bubble curtain to attenuate the sound.

23. Permittee shall install and maintain, at their expense, any safety lights and signals prescribed by the U.S. Coast Guard (USCG) through regulations or otherwise, on the authorized marine facilities. The USCG can be reached at the following address and telephone number: Commander (oan) 17th Coast Guard District,

Post Office Box 25517, Juneau, Alaska 99802-5517, telephone (907) 463-2254.

24. The size of the fill footprint shall be restricted to minimize adverse environmental impacts to the Slate Creek Cove and Berners Bay ecosystem.

25. Permittee shall use metal grating as a top surface, rather than planking, as this results in greater light transmission to aquatic plants. Light penetration is needed to maintain intertidal habitat beneath structures such as walkways, catwalks, and gangways.

26. No portion of any floating structure may ground at any tidal stage.

27. No in-water work shall occur in Berners Bay between March 15 through June 30, to protect juvenile salmonids, herring and eulachon.

28. The placement of fill material into marine waters shall only occur during low-water periods.

29. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.

ALASKA DEPARTMENT OF CONSERVATON CERTIFICATION: The following conditions were listed on ADEC's Certificate of Reasonable Assurance, and in accordance with 33 U.S.C. 1341(d), are incorporated into the Department of the Army permit.

1. The permittee shall submit mine operations, water quality monitoring, and closure plans to the department for its approval before introducing any discharge into the TDF and shall secure department approval for any modification to approved plans.

2. During construction of the tailings dam the construction area shall be isolated from the flowing waters. Techniques such as stream diversion, dam and pump, or stream fluming shall be incorporated into the construction activity to insure that silt laden water resulting from construction activities is not carried downstream and to marine waters.

3. All soil disturbing construction operations that would increase turbidity of surface waters to levels that would violated Alaska Water Quality Standards shall be temporarily suspended if on site monitoring demonstrates said violations.

4. For culverts which carry waters that are discharging or will discharge into fish-bearing fresh waters or marine waters, installation shall not occur within the flowing waters of the stream/drainage. Culvert installation techniques such as stream diversion, dam and pump, or stream fluming shall be incorporated into the installation activity to insure that silt laden water is not carried into sensitive fish-habitat. DNR Habitat permits shall address the anadromous fish-bearing streams.

5. Any disturbance in the stream banks or streambeds area shall be stabilized to prevent erosion and resultant sedimentation of the water body during and after operations. Any disturbed areas shall be re-contoured and revegetated as soon as practicable.

6. During the construction and operational phases, spill response equipment and supplies shall be available on site for the cleanup and containment of petroleum product leaks or spills.

7. The wooden portions of road bridges and of the marine terminal shall not be treated with Any preservative containing or pentachlorophenol and if treated with creosote, the creosote shall be applied via pressure treatment that inhibits leaching at a rate that causes a sheen to form on the water.

8. The mine tailings shall be tested on a quarterly basis, in accordance with a monitoring plan approved by the department, to insure there are no significant deviations from the original tailings analysis which may affect monitoring, closure requirements, water quality, or any other permit condition. Constituent levels that shall be measured include, but are not limited to, aluminum, ammonia, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, nitrate, pH, selenium, silver, sulfate, total dissolved solids (TDS), zinc, meteoric water mobility, and acid base accounting. These analyses shall be included in the annual report to the U.S. Forest Service for all agencies to review.

9. Untreated runoff from the topsoil stock pile shall not be allowed to reach any natural body of water.

10. Construction of the infiltration gallery shall be isolated from the flowing waters of the stream.

11. Intertidal fill placed for the marine terminal shall be clean of organics. Fill shall be placed during low tide in those intertidal areas which are dry during low tide.

12. The appropriate water quality protection BMPs shall be utilized during the proposed timber

harvest around Lower Slate Lake, to protect the waters of the lake, stream, and ocean.

13. Bridge abutment construction shall be isolated from the flowing waters of the stream.

14. Coeur Alaska, Inc., shall provide proof of financial responsibility in an amount and in form(s) acceptable to the Department, in accordance with AS 46.03.100(f) and 18 AAC 60.265. If the financial assurances provided to other state and federal agencies are not sufficient to satisfy the Departments requirements, Coeur Alaska Inc. will provide any additional financial assurances determined by the Department to be necessary.

15. Capping of the tailings, addition of organics, or other state approved mitigation measures will be required at or after mine closure if water quality criteria are not met in the impoundment, or if the tailings do not successfully re-colonize as determined by the state.

Table 1 - Kensington Gold Project –

Amendment to Permit # 2-900592 – Facility Acres

Area *	Facility Description	Status	Acres of Waters of the U.S.**	Fill Volume***	Mechanical Land Clearing (acres)
1	Kensington Comet Beach Camp	Existing/ Permitted	0	0	0
2	Kensington Road	Permitted	(0.9)	0	0
3	Kensington Borrow Source	Proposed Expansion	(0.3)	0	0.3
4	Kensington Development Rock Storage	Existing/ Permitted	(5.1)	(500,000)	0
5	Kensington Water Treatment Plant/ Ponds	Existing/ Permitted	(2.6)	(20,000)	0
6	Kensington Top-soil Stockpile Area	Permitted	(2.1)	(30,000)	2.1
7	Kensington 2050 Waste Rock Dump	Existing	0	0	0
8	Jualin Process Area	Proposed	1.1	21,000	1.1
9****	Jualin Develop-ment Rock Storage	Proposed	4.3	100,000	4.3
10	Jualin Process Area Treatment Pond	Proposed	0	(20,000)	0
11	Jualin Process Area-Topsoil Stockpile	Proposed	0	(10,000)	0.3
12	Jualin Pumphouse Area	Proposed	0.1	0	0.1
13	Jualin Access Road	Proposed Expansion	8.2	26,000	8.2
14	Jualin Laydown Area #1	Existing	(0.4)	(4,800)	0
15	Jualin Laydown Area #2	Proposed	(3.5)	0	3.5
16	Jualin Laydown Area #3	Existing	(0.8)	0	0
17	Jualin Admini-stration Area	Existing	(2.5)	(32,000)	0
18	Jualin Borrow Source #1	Proposed Expansion	0	0	0
19	Jualin Borrow Source #2	Proposed Expansion	(0.1)	0	0.1
20	Jualin Borrow Source #3	Proposed Expansion	(2.4)	0	2.4

Area *	Facility Description	Status	Acres of Waters of the U.S.**	Fill Volume***	Mechanical Land Clearing (acres)
21	Jualin Borrow Source #4	Proposed	(0.7)	0	0.7
22	Tailings Facility Access Road & Pipeline	Proposed	4.7	20,000	4.7
23	Tailings Facility Access Road	Proposed	0.3	2,000	0.3
24	Tailings Lake (tailings as fill)	Proposed	23.5	3,168,000	23.5
25	Tailings Lake Margin Working Area	Proposed	8.25	450	8.25
25a	Tailings Lake Water Treatment Plant	Proposed	0.24	1000	0.24
25b	Tailings Lake Diversion Pipe Intake Dam	Proposed	0.01	25	0
26	Tailings Dam Borrow Source	Proposed	(0.3)	0	0.3
27	Tailings Pipeline and Access Road	Proposed	3.0	15,000	3.0
28	Tailings Dam and Plunge Pool Area	Proposed	5.9	120,000	0
29	Slate Creek Cove Marine Terminal	Proposed	1 9	10,475	1.9
30	Slate Creek Cove Topsoil Stockpile	Proposed	0.2	4,000	0.2
TOTALS			**61.7**	**3,487,950**	**65.49**

*Areas are shown on Sheet 3 of 14

**Areas in parentheses are existing, permitted, or have no fill associated with the disturbance to wetlands

***Fill volumes in parentheses are existing or have been previously permitted

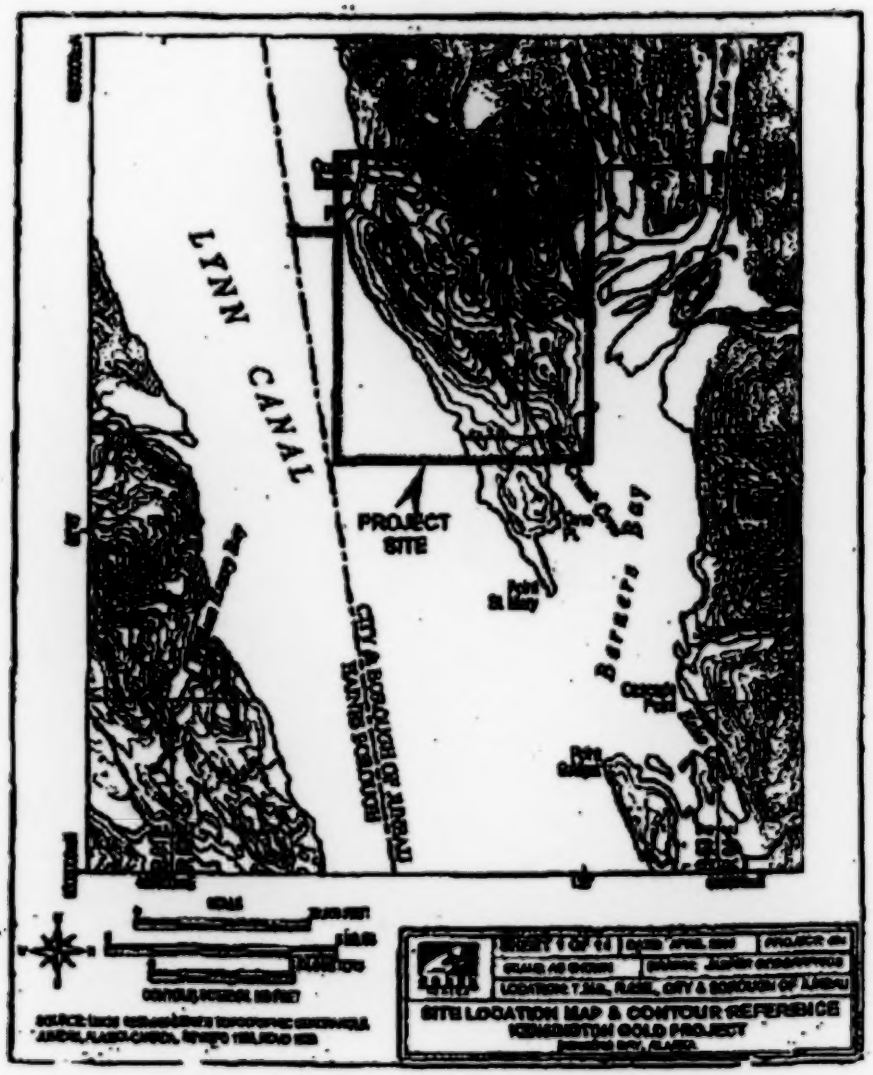
****Of the proposed facilities in this amendment, this is the only facility which will not be reclaimed as wetlands

Table 2 - Summary of Disturbed Areas and Wetlands

Parcel	Reclamation (acres)		
	Wetland - or open water	Upland	No Action
1 – Kensington Comet Beach Camp	0	3.2	0
2 – Kensington Road	7.6	0.5	0
3 – Kensington Borrow Source	1.5	0	0
4 – Kensington Development Rock Storage	0	14.3	0
5 – Kensington WTP/Ponds	4.3	0	0
6 – Kensington Snow/Topsoil Stockpile	2.1	0	0
7 – 2050 Level Portal Waste Rock Dump	0	0	1.5
8 – Jualin Process Area	0	0	12.9
9 – Jualin Development Rock Storage Area	0	4.3	0
10 – Jualin Process Area Treatment Pond	0	0	1.5
11 – Jualin Area Snow/Topsoil Stockpile	0	0.3	0
12 – Jualin Pumphouse Area	0	0	0.1
13 – Jualin Access Road	0	0	33.8
14 – Jualin Laydown Area #1	0.4	0	0
15 – Jualin Laydown Area #2	0	0	3.5
16 – Jualin Laydown Area #3	0	0	0.8
17 – Jualin Administration Area	0	0	2.5
18 – Jualin Borrow Source #1	0	2.0	0
19 – Jualin Borrow Source #2	0	1.3	0
20 – Jualin Borrow Source #3	3.6	0	0
21 – Jualin Borrow Source #4	0.7	0	0
22 – TSF Access Road and Pipeline	0	0	7.4
23 – Tailings Facility Access road	0	0	2.6
24 – Tailings Lake	61.8[1,2]	0	0
25 – Tailings Lake Margin Working Area	8.5	9.4	0
26 – Tailings Dam Borrow Source	0.5	4.1	0
27 – TSF Access Road and Pipeline	2.8	7.3	0
28 – Tailings Dam Plunge Pool Area	5.9	0.9	0
29 – Slate Creek Cove Marine Terminal	1.9	0	0
30 – Slate Creek Cove Snow/Stockpile	0.2	0	0
Totals	**101.8**	**47.6**	**66.6**

[1] Total area (61.8 acres) includes 58.3 acres of deep water, greater than 6.6 feet in depth.

[2] Total lake area includes area of existing lake (21.9 acres).



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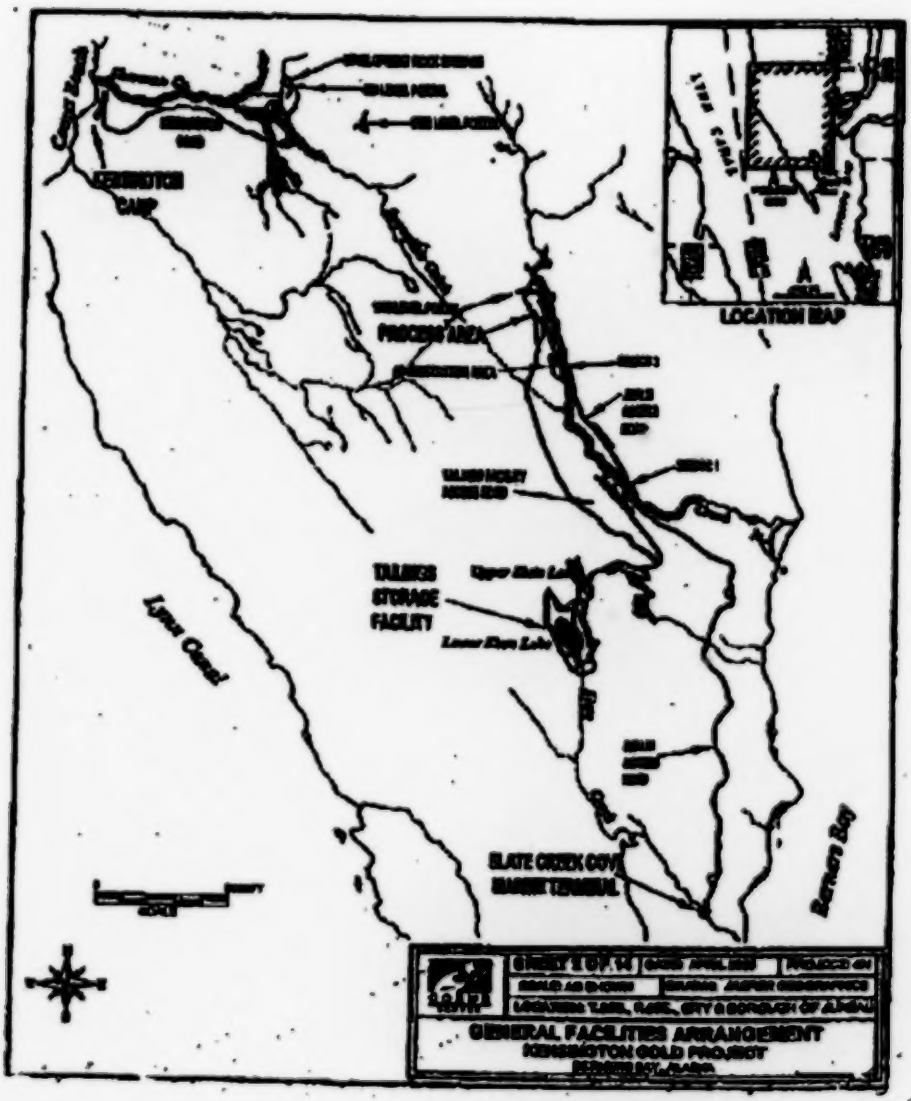
LOCATION MAP
PROCESS AREA
TAILINGS STORAGE FACILITY
Lower Slate Lake
Lower Slate Lake
Lynx Creek
Slate Creek
SLATE CREEK COVE BARGE TERMINAL
Berners Bay
GENERAL FACILITIES ARRANGEMENT
KENNECOTT GOLD PROJECT